

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River and the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown Wastewater Treatment Facility (WWTF), authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Lakeview Regional Water Reclamation Plant (WRP), authorized by TPDES Permit No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES

Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd.

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional WRP); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend Regional Water Reclamation Facility (WRF)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 784 acre-feet per year (0.7 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and
8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be



discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills WRF).

The Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County, ZIP Code 75009; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County, ZIP Code 75068; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County, ZIP Code 75065; and
4. Riverbend Regional WRF will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County, ZIP Code 76227; and
5. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County, ZIP Code 76227; and
6. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249; and
7. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County, in ZIP Code 76266; and
8. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County, ZIP Code 76227; and
9. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County, ZIP Code 76227; and
10. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County, ZIP Code 75009.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017 and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018. Additional information was received on April 27, 2021. The application was amended and additional information was received on May 25, August 31, and December 2, 2022, and May 11 and June 14, 2023.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by November 28, 2023. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by November 28, 2023. The Executive Director may approve the application unless a written request for a contested case hearing is filed by November 28, 2023.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued: October 24, 2023

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, and Aubrey Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville) and the Elm Fork Trinity River, tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown Wastewater Treatment Facility (WWTF), authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of

0.950 mgd; Lakeview Regional Water Reclamation Plant (WRP), authorized by TPDES Permit No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd; and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend Regional Water Reclamation Facility (WRF)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 784 acre-feet per year (0.7 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and



7. Aubrey Branch and the Elm Fork Trinity River to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and
8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills WRF); and

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County; and
4. Riverbend Regional WRF will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County; and
5. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County; and
6. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and
7. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County; and
8. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County; and

9. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County; and
10. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity Regional Water District Reuse Accounting System*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

- A. Permittee is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River to convey not to exceed the following amounts of Lake Chapman-derived surface water-based return flows for municipal and industrial purposes in Permittee's service area:
  1. 16,805 acre-feet per year discharged from the City of Celina's Downtown WWTF, authorized by TPDES Permit No. WQ0014246001, as amended.
  2. 22,406 acre-feet per year discharged from UTRWD's Doe Branch Regional WRP, authorized by TPDES Permit No. WQ0010698003, as amended.

3. 8,402 acre-feet per year discharged from UTRWD's Lakeview Regional WRP, authorized by TPDES Permit No. WQ0010698001, as amended.
  4. 11,203 acre-feet per year discharged from UTRWD's Riverbend Regional WRF, authorized by TPDES Permit No. WQ0010698002, as amended.
  5. 5,153 acre-feet per year discharged from UTRWD's Peninsula Regional WRP, authorized by TPDES Permit No. WQ0014323001, as amended.
  6. 784 acre-feet per year discharged from the City of Krum's WWTF, authorized by TPDES Permit No. WQ0010729001, as amended.
  7. 2,084 acre-feet per year discharged from the City of Sanger's WWTF, authorized by TPDES Permit No. WQ0014372001, as amended.
  8. 616 acre-feet per year discharged by the City of Aubrey's WWTF, authorized by TPDES Permit No. WQ0013647001.
  9. 16,805 acre-feet per year discharged from the Mustang Special Utility District's Sandbrock WWTF, authorized by TPDES Permit No. WQ0015536001.
  10. 16,805 acre-feet per year discharged by the City of Celina Legacy Hills WRF by TPDES Permit No. WQ0016068001.
- B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

## 2. DISCHARGE POINTS AND RATES

Lake Chapman-derived return flows under this amendment will be discharged at the following locations and rates in the Trinity River Basin:

- A. Celina Downtown WWTF, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County.
- B. Doe Branch Regional WRP, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County.
- C. Lakeview Regional WRP, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville) located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County.
- D. Riverbend Regional WRF, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville) located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County.



- E. Peninsula Regional WRP, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County.
- F. City of Krum WWTF, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County.
- G. Sanger WWTF, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County.
- H. City of Aubrey WWTF, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County.
- I. Sandbrock WWTF, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County.
- J. Celina Legacy Hills WRF, at a maximum 2-hour rate of 92.83 cfs (41,667 gm), at a point on Little Elm Creek located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County.

### 3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

### 4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan. This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.
- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in

accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse Accounting System*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.

- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.
- F. Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit No. WQ0014246001, and be granted TPDES Permit No. WQ0016068001. Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits or amendments are not granted.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

-----  
For the Commission

Date Issued:

## Sarah Henderson

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**From:** Lauren Kalisek <[REDACTED]>  
**Sent:** Wednesday, October 18, 2023 8:40 AM  
**To:** Sarah Henderson  
**Cc:** Humberto Galvan  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A

Sarah

UTRWD has no further comments on the draft notice and permit amendment. Thank you so much for your assistance, and we look forward to continuing with the application process.

Lauren



### LAUREN KALISEK

Managing Director  
512-322-5847 Direct  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800

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---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Thursday, October 5, 2023 4:47 PM  
**To:** Lauren Kalisek <[REDACTED]>  
**Cc:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A

Ms. Kalisek,

In response to the Applicants comments submitted on September 26, 2023, please find the attached revised, redline draft notice and draft amendment for your review.

Any additional comments or questions are requested by October 19, 2023.

Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

## Sarah Henderson

---

**From:** Sarah Henderson  
**Sent:** Thursday, October 5, 2023 4:47 PM  
**To:** Lauren Kalisek  
**Cc:** Humberto Galvan  
**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A  
**Attachments:** UTRWD\_5778A\_Revised Redline Drafts\_5Oct2023.pdf

Ms. Kalisek,

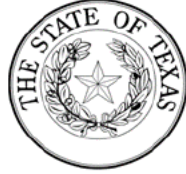
In response to the Applicants comments submitted on September 26, 2023, please find the attached revised, redline draft notice and draft amendment for your review.

Any additional comments or questions are requested by October 19, 2023.

Sincerely,  
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(F) 512.239.4770

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River and the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown Wastewater Treatment Facility (WWTF), authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Lakeview Regional



Water Reclamation Plant (WRP), authorized by TPDES Permit No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd.

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional ~~Water Reclamation Plant (WRP)~~); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend Regional Water Reclamation Facility (WRF)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 784 acre-feet per year (0.7 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and



8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills WRF).

The Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County, ZIP Code 75009; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County, ZIP Code 75068; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County, ZIP Code 75065; and
4. Riverbend Regional WRF will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County, ZIP Code 76227; and
5. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County, ZIP Code 76227; and
6. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249; and
7. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County, in ZIP Code 76266; and
8. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County, ZIP Code 76227; and
9. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County, ZIP Code 76227; and
10. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County, ZIP Code 75009.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017 and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018. Additional information was received on April 27, 2021. The application was amended and additional information was received on May 25, August 31, and December 2, 2022, and May 11 and June 14, 2023.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:

DRAFT

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, and Aubrey Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville) and the Elm Fork Trinity River, tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown Wastewater Treatment Facility (WWTFP), authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of



0.950 mgd; Lakeview Regional Water Reclamation Plant (WRP), authorized by TPDES Permit No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd; and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown ~~Wastewater Treatment Facility (WWTF)~~); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend Regional Water Reclamation Facility (WRF)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 784 acre-feet per year (0.7 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and

7. Aubrey Branch and the Elm Fork Trinity River to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and
8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills WRF); and

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County; and
4. Riverbend Regional WRF will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County; and
5. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County; and
6. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and
7. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County; and
8. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County; and

9. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County; and
10. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity Regional Water District Reuse Accounting System, Detailed Documentation*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

- A. Permittee is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River to convey not to exceed the following amounts of Lake Chapman-derived surface water-based return flows for municipal and industrial purposes in Permittee's service area:

1. 16,805 acre-feet per year discharged from the City of Celina's Downtown WWTF, authorized by TPDES Permit No. WQ0014246001, as amended.



2. 22,406 acre-feet per year discharged from UTRWD's Doe Branch Regional WRP, authorized by TPDES Permit No. WQ0010698003, as amended.
  3. 8,402 acre-feet per year discharged from UTRWD's Lakeview Regional WRP, authorized by TPDES Permit No. WQ0010698001, as amended.
  4. 11,203 acre-feet per year discharged from UTRWD's Riverbend Regional WRF, authorized by TPDES Permit No. WQ0010698002, as amended.
  5. 5,153 acre-feet per year discharged from UTRWD's Peninsula Regional WRP, authorized by TPDES Permit No. WQ0014323001, as amended.
  6. 784 acre-feet per year discharged from the City of Krum's WWTF, authorized by TPDES Permit No. WQ0010729001, as amended.
  7. 2,084 acre-feet per year discharged from the City of Sanger's WWTF, authorized by TPDES Permit No. WQ0014372001, as amended.
  8. 616 acre-feet per year discharged by the City of Aubrey's WWTF, authorized by TPDES Permit No. WQ0013647001.
  9. ~~16,814.2838~~16,805 acre-feet per year discharged from the Mustang Special Utility District's Sandbrock WWTF, authorized by TPDES Permit No. WQ0015536001.
  10. 16,805 acre-feet per year discharged by the City of Celina Legacy Hills WRF by TPDES Permit No. WQ0016068001.
- B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

## 2. DISCHARGE POINTS AND RATES

Lake Chapman-derived return flows under this amendment will be discharged at the following locations and rates in the Trinity River Basin:

- A. Celina Downtown WWTF, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County.
- B. Doe Branch Regional WRP, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County.
- C. Lakeview Regional WRP, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville) located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County.

- D. Riverbend Regional WRF, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville) located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County.
- E. Peninsula Regional WRF, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County.
- F. City of Krum WWTF, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County.
- G. Sanger WWTF, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County.
- H. City of Aubrey WWTF, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County.
- I. Sandbrock WWTF, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County.
- J. Celina Legacy Hills WRF, at a maximum 2-hour rate of 92.83 cfs (41,667 gm), at a point on Little Elm Creek located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County.

### 3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

### 4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan. This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.

- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse Accounting System* ~~Detailed Documentation~~). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.
- F. Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, ~~WQ0014372001, WQ0010698002,~~ and be granted TPDES Permit No. WQ0016068001. Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits or amendments are not granted.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

-----  
For the Commission

Date Issued:

## Sarah Henderson

---

**From:** Lauren Kalisek [REDACTED]  
**Sent:** Tuesday, September 26, 2023 8:51 PM  
**To:** Sarah Henderson  
**Cc:** Humberto Galvan; Natalie Marquez  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A  
**Attachments:** 2023.09.26 UTRWD\_5778A\_Revised Draft UTRWD Comments.pdf; City of Sanger WWTF WQ0014372001 Issued 2022.07.14.pdf; UTRWD Riverbend Regional WRF WQ0010698002 Issued 2023.01.23.pdf

Sarah

Attached please find UTRWD's comments on the draft notice and amendment for 5778A. These are non-substantive clarification requests to ensure consistent use of terminology in the documents and other clean up edits. We are also providing copies of recently issued TPDES permits that are referenced in our comments. We appreciate staff's consideration of these comments. Please let me know if you have any questions or if I can be of any further assistance.

Thanks

Lauren



### LAUREN KALISEK

Managing Director  
512-322-5847 Direct  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800

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\*\*\*\*ATTENTION TO PUBLIC OFFICIALS AND OFFICIALS WITH OTHER INSTITUTIONS SUBJECT TO THE OPEN MEETINGS ACT \*\*\*\*

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---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Tuesday, September 12, 2023 5:25 PM  
**To:** Lauren Kalisek [REDACTED]  
**Cc:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A

Ms. Kalisek,

Please find the attached, revised red-lined draft public notice and amendment for your review.  
Any additional comments are requested by September 26, 2023.

Feel free to contact me with any questions.

Sincerely,

Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Kelly Keel, *Interim Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

September 12, 2023

Ms. Lauren Kalisek, Managing Director  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Avenue, Suite 1900  
Austin, Texas 78701

VIA E-MAIL

RE: Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough,  
North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch,  
Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River, Trinity River  
Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise counties

Dear Ms. Kalisek:

This acknowledges receipt, on May 11 and June 14, 2023, of additional information.

Red-lined revised drafts of the public notice and amendment to Water Use Permit No. 5778, and the related technical addenda are attached.

Staff is recommending that the referenced application be granted in accordance with the attached drafts. Please review the drafts and contact me no later than September 26, 2023 with any additional comments or questions as the notice will be forwarded to the Office of the Chief Clerk for mailing after that date.

If you have any questions concerning this matter please contact me via email at [sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov) or by telephone at (512) 239-2535.

Sincerely,

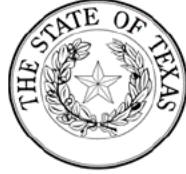
*Sarah Henderson*

Sarah Henderson, Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Attachments



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River and the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Lakeview WWTP, authorized by TPDES Permit



No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd.

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Regional Water Reclamation Facility (WRFP)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 631.06784 acre-feet per year (0.7563 mgd) of Lake Chapman-derived return flows; authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River; to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and

~~9.8.~~ Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805+4.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and

~~10.9.~~ Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills ~~Water Reclamation Facility~~ (WRF)).

~~WHEREAS,~~ The Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County, ZIP Code 75009; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County, ZIP Code 75068; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County, ZIP Code 75065; and
4. Riverbend Regional WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County, ZIP Code 76227; and
- ~~5.4.~~ Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County, ZIP Code 76227; and
- ~~6.5.~~ City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249; and
- ~~7.6.~~ Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County, in ZIP Code 76266; and
- ~~8.7.~~ City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County, ZIP Code 76227; and
- ~~9.8.~~ Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County, ZIP Code 76227; and
- 10.9. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County, ZIP Code 75009.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, ~~June 22,~~ and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018. Additional information was received on April 27, 2021. The application was amended and additional information was received on May 25, ~~and~~ August 31, ~~and 2022~~ December 2, 2022, and May 11 and June 14, 2023.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:

DRAFT



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, and Aubrey Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville) and the Elm Fork Trinity River, tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; [Lakeview WWTP](#).



authorized by TPDES Permit No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd; and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown Wastewater Treatment Facility (WWTF)); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend Regional Water Reclamation Facility (WRFP)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 631.06784 acre-feet per year (0.7563 mgd) of Lake Chapman-derived return flows; authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and

7. Aubrey Branch and the Elm Fork Trinity River; to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and
8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805+4.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills ~~Water Reclamation Facility~~ (WRF)); and

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County; and
- ~~4.~~ Riverbend Regional WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County; and
- ~~54.~~ Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County; and
- ~~65.~~ City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and
- ~~76.~~ Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County; and
- ~~87.~~ City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County; and

89. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County; and

109. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity ~~Regional River Water District Reuse of Chapman Lake Water~~ Accounting System Plan Detailed Documentation*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. Permittee is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River to convey not to exceed the following amounts of Lake Chapman-derived surface water-based return flows for municipal and industrial purposes in Permittee's service area:

1. 16,805 acre-feet per year discharged from the City of Celina's Downtown WWTF, authorized by TPDES Permit No. WQ0014246001, as amended.



~~2.~~ 22,406 acre-feet per year discharged from UTRWD's Doe Branch Regional WRP, authorized by TPDES Permit No. WQ0010698003, as amended.

~~2-3.~~ 8,402 acre-feet per year discharged from UTRWD's Lakeview Regional WRP, authorized by TPDES Permit No. WQ0010698001, as amended.

~~3-4.~~ 11,203 acre-feet per year discharged from UTRWD's Riverbend Regional WRP, authorized by TPDES Permit No. WQ0010698002, as amended.

~~4-5.~~ 5,153 acre-feet per year discharged from UTRWD's Peninsula Regional WRP, authorized by TPDES Permit No. WQ0014323001, as amended.

~~5-6.~~ ~~784631.06~~ acre-feet per year discharged from the City of Krum's WWTF, authorized by TPDES Permit No. WQ0010729001, as amended.

~~6-7.~~ 2,084 acre-feet per year discharged from the City of Sanger's WWTF, authorized by TPDES Permit No. WQ0014372001, as amended.

~~7-8.~~ 616 acre-feet per year discharged by the City of Aubrey's WWTF, authorized by TPDES Permit No. WQ0013647001.

~~8-9.~~ 16,814.2838 acre-feet per year discharged from the Mustang Special Utility District's Sandbrock WWTF, authorized by TPDES Permit No. WQ0015536001.

~~9-10.~~ 16,805 acre-feet per year discharged by the City of Celina Legacy Hills WRF by under TPDES Permit No. WQ0016068001.

- B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

## 2. DISCHARGE POINTS AND RATES

Lake Chapman-derived return flows under this amendment will be discharged at the following locations and rates in the Trinity River Basin:

A. Celina Downtown WWTF, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County.

B. Doe Branch Regional WRP, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County.

B-C. Lakeview Regional WRP, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville) located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County.

~~E.D.~~ Riverbend Regional WRF, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville) located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County.

~~D.E.~~ Peninsula Regional WRF, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County.

~~E.F.~~ City of Krum WWTF, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County.

~~F.G.~~ Sanger WWTF, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County.

~~H.G.~~ City of Aubrey WWTF, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County.

~~I.~~ Sandbrock WWTF, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County.

~~I.~~ Celina Legacy Hills WRF, at a maximum 2-hour rate of 92.83 cfs (41,667 gm), at a point on Little Elm Creek located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County.

### 3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

### 4. SPECIAL CONDITIONS

A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778.

B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.

C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan.



This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.

E.D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water—Accounting Plan System Detailed Documentation*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.

F.E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.

G.F. Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, WQ0014372001, WQ0010698002, ~~and be granted TPDES Permit No. WQ0016068001.~~ Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits or amendments are not granted.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

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For the Commission

Date Issued:

**Texas Commission on Environmental Quality**

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INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager  
Water Rights Permitting Team

Date: July 20, 2023

Through: ~~K~~ Kathy Alexander, Ph.D., Policy and Technical Analyst  
Water Availability Division

TG Trent Gay, Team Leader  
Surface Water Availability Team

From: Andrew Garcia, Hydrologist  
Surface Water Availability Team

Subject: Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork  
Trinity River (Lake Lewisville), Trinity River Basin  
Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant Counties

**HYDROLOGY REVIEW ADDENDUM**

**Review and Conclusions**

Staff completed its hydrology review memorandum on November 17, 2021, and a subsequent hydrology review addendum on September 14, 2022. On May 11, 2023, UTRWD submitted a revised accounting plan (Upper Trinity Regional Water District Reuse Accounting System Detailed Documentation) that more accurately reflects the discharge and diversions of Lake Chapman-derived return flows. The accounting plan was subsequently reviewed, and a final version was submitted on June 14, 2023. Staff reviewed the accounting plan and found it to be acceptable. Staff recommends that the amended application be granted, that staff's previous recommendations be retained in the revised amendment, except for Paragraph 4.D. which should be revised as described below.

In lieu of Paragraph 4.D.

Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (Upper Trinity Regional Water District Reuse Accounting System Detailed Documentation). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to

the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.



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Andrew Garcia, Hydrologist



TPDES PERMIT NO.  
WQ0014372001  
[For TCEQ office use only - EPA I.D.  
No. TX0022403]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

This major amendment supersedes and  
replaces TPDES Permit No.  
WQ0014372001 issued on October 13,  
2016.

PERMIT TO DISCHARGE WASTES

under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

City of Sanger

whose mailing address is

P.O Box 1729,  
Sanger, Texas 76266

is authorized to treat and discharge wastes from the City of Sanger Wastewater Treatment  
Facility, SIC Code 4952

located at 300 Jones Street, Sanger in Denton County, Texas 76266

via Outfall 001 (pre dam breach) to Ranger Branch, thence to Paddock Lake, thence to Ranger  
Branch, thence to Clear Creek, thence to Lewisville Lake in Segment No. 0823 of the Trinity  
River Basin; or via Outfall 001 (post dam Breach) to Ranger Branch, thence to Clear Creek,  
thence to Lewisville Lake in Segment No. 0823 of the Trinity River Basin or via Outfall 002 to  
Ranger Branch, thence to Clear Creek, thence to Lewisville Lake in Segment No. 0823 of the  
Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth  
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),  
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does  
not grant to the permittee the right to use private or public property for conveyance of  
wastewater along the discharge route described in this permit. This includes, but is not limited  
to, property belonging to any individual, partnership, corporation, or other entity. Neither does  
this permit authorize any invasion of personal rights nor any violation of federal, state, or local  
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be  
necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE: July 14, 2022

A handwritten signature in black ink, appearing to read "T. G. Baker", written over a horizontal line.

For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 1.2 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.98 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 2,917 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (82)	15	25	35	One/week	Composite
Total Suspended Solids	15 (123)	25	40	60	One/week	Composite
Ammonia Nitrogen	2 (16)	5	10	15	One/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.



INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 1.2 MGD facility and lasting through completion of the breach of Paddock Lake Dam or the completion of the construction of Outfall 002\*, and the completion of expansion to the 1.86 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations.

The annual average flow of effluent shall not exceed 1.2 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,882 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	7 (70)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (150)	25	40	60	Two/week	Composite
Ammonia Nitrogen	2 (20)	5	10	15	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

The combined flows from outfalls 001 and 002 shall not exceed 1.2 MGD.

\*See Other Requirement No. 9

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon the completion of expansion to the 1.2 MGD facility and lasting through completion of the breach of Paddock Lake Dam or the completion of the construction of Outfall 002\*, and the expansion to the 1.86 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations.

The annual average flow of effluent shall not exceed 1.2 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,882 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	7 (70)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (150)	25	40	60	Two/week	Composite
Ammonia Nitrogen	2 (20)	5	10	15	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

The combined flows from outfalls 001 and 002 shall not exceed 1.2 MGD.

\*See Other Requirement No. 9

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of the breach of Paddock Lake Dam or the completion of the construction of Outfall 002\* and the expansion to the 1.86 MGD facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitation:

The annual average flow of effluent shall not exceed 1.86 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,882 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (155)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (233)	25	40	60	Two/week	Composite
Ammonia Nitrogen	2 (31)	5	10	15	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

The combined flows from outfalls 001 and 002 shall not exceed 1.86 MGD.

\*See Other Requirement No. 9

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon the completion of the breach of Paddock Lake Dam or the completion of the construction of Outfall 002\* and the expansion to the 1.86 MGD facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 1.86 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,882 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (155)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (233)	25	40	60	Two/week	Composite
Ammonia Nitrogen	2 (31)	5	10	15	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

The combined flows from outfalls 001 and 002 shall not exceed 1.86 MGD.

\*See Other Requirement No. 9

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

## DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

### 1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

### 2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.



- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Compliance Monitoring Team of the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Compliance

Monitoring Team of the Enforcement Division (MC 224).

#### 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2023, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Compliance Monitoring Team of the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.



**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions

established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or

- iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee;
  - ii. the permit number(s);
  - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iv. the date of filing of the petition.

## **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.



6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
  10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
  11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
    - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
    - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
    - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
    - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
    - e. The term "industrial solid waste management unit" means a landfill, surface

impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
  - i. Volume of waste and date(s) generated from treatment process;
  - ii. Volume of waste disposed of on-site or shipped off-site;
  - iii. Date(s) of disposal;
  - iv. Identity of hauler or transporter;
  - v. Location of disposal site; and
  - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

#### B. Testing Requirements

1. Sewage sludge or biosolids shall be tested once during the term of this permit in the Interim I phase and annually in the Interim II and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

- a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;



Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B biosolids

criteria.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a

single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.
  - ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.
4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Biosolids shall be injected below the surface of the land.
  - ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test	- once during the term of this permit in the Interim I phase and annually in the Interim II and Final phases
PCBs	- once during the term of this permit in the Interim I phase and annually in the Interim II and Final phases

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) *The amount of bulk biosolids applied to the land (dry wt. basis).*



Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE OR BIOSOLIDS FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

**D. Notification Requirements**

1. If bulk is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk biosolids will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

**E. Record Keeping Requirements**

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a

period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
  - c. The number of acres in each site on which bulk biosolids are applied.
  - d. The date and time biosolids are applied to each site.
  - e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
  - f. The total amount of biosolids applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **F. Reporting Requirements**

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk biosolids are applied.
  - c. The date and time bulk biosolids are applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
  - e. The amount of biosolids (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.



**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested once during the term of this permit in the Interim I phase and annually in the Interim II and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

##### **A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

##### **B. Record Keeping Requirements**

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge or biosolids transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

### **C. Reporting Requirements**

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

**OTHER REQUIREMENTS**

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This facility must be operated by a chief operator or an operator holding a Class C license or higher in Interim I phase and Class B license or higher in the Interim II and Final phases. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. There is no mixing zone established for this discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.
4. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, daily may be reduced to 5/week in the Interim I, II and final phases. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule, if necessary, to protect human health or the environment.
7. Prior to construction of the Interim II and Final phases treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal

letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications, and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the effluent limitations required on Pages 2a, 2b, 2c, and 2d of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

8. The permittee shall notify the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five (45) days prior to the completion of the Interim II and Final phases on Notification of Completion Form 20007.
9. The permittee may breach the dam at Paddock Lake and restore the immediate receiving water body, Ranger Branch, to a free-flowing stream. An alternative to restoring Ranger Branch, is to by-pass the dam and construct Outfall 002 at a point below Paddock Lake.



**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007

## BIOMONITORING REQUIREMENTS

### CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 and 002 for whole effluent toxicity (WET) testing.

#### 1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. Within 90 days of initial discharge of the 1.2 MGD Interim II facility, the permittee shall conduct the following toxicity tests using the test organisms, procedures and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
  - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction

- 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.
- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
  - 1) a control mean survival of 80% or greater;
  - 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
  - 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
  - 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
  - 5) a critical dilution CV% of 40 or less for young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test, unless statistically significant toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid;
  - 6) a percent minimum significant difference of 47 or less for water flea reproduction; and
  - 7) a PMSD of 30 or less for fathead minnow growth.
- b. Statistical Interpretation
  - 1) For the water flea survival and reproduction test, the statistical analyses used to determine the inhibition concentration of effluent that would cause a 25% reduction (IC<sub>25</sub>) in survival or mean young per female shall be as described in the methods manual referenced in Part 1.b.
  - 2) For the fathead minnow larval survival and growth tests, the statistical analyses used to determine the IC<sub>25</sub> in survival or growth shall be as described in the methods manual referenced in Part 1.b.

- 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 4) Most point estimates are derived from a mathematical model that assumes a continuous dose-response relationship. For any test result that demonstrates a non-continuous (threshold) response, or a non-monotonic dose-response relationship, the IC<sub>25</sub> should be determined based on the method guidance manual referenced in Item 3.
- 5) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic dose-response relationship may be submitted, prior to the due date, for technical review of test validity and acceptability. The method guidance manual referenced in Item 3 will be used as the basis, along with best professional judgement, for making a determination of test validity and acceptability.

c. Dilution Water

- 1) Dilution water used in the toxicity tests shall be the receiving water collected at a point upstream of the discharge as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:
  - a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or
  - b) use the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
  - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);
  - c) the permittee submitted all test results indicating receiving water

toxicity with the reports and information required in Part 3.

- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

- 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
- 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
- 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.
- 5) The effluent samples shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
  - 1) Annual biomonitoring test results are due on or before January 20th for

biomonitoring conducted during the previous 12-month period.

- 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
  - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
- 1) For the water flea, Parameter T4P3B, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the water flea, Parameter T6P3B, report the IC25 for survival.
  - 3) For the water flea, Parameter T5P3B, enter a "1" if the IC25 for reproduction is less than the critical dilution; otherwise, enter a "0."
  - 4) For the water flea, Parameter T7P3B, report the IC25 for reproduction.
  - 5) For the fathead minnow, Parameter T4P6C, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 6) For the fathead minnow, Parameter T6P6C, report the IC25 for survival.
  - 7) For the fathead minnow, Parameter T5P6C, enter a "1" if the IC25 for growth is less than the critical dilution; otherwise, enter a "0."
  - 8) For the fathead minnow, Parameter T7P6C, report the IC25 for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For retest number 2, Parameter 22416, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."

#### 4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. A significant effect is defined as an IC25 of a specified endpoint (survival, growth, or reproduction) less than the critical dilution. Significant lethality is defined as a survival IC25 less than the critical dilution. Similarly, significant sublethality is defined as a growth or reproduction IC25 less than the critical dilution.



- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
  - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity

characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

- 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation which identifies the

- pollutant(s) and source of effluent toxicity;
- 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the

selected control mechanism.

- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						

\*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

1. Is the IC25 for reproduction less than the critical dilution (100%)? \_\_\_\_\_ YES  
 \_\_\_\_\_ NO

2. Is the IC25 for survival less than the critical dilution (100%)? \_\_\_\_\_ YES \_\_\_\_\_  
 NO

3. Enter percent effluent corresponding to each IC25 below:

IC25 survival = \_\_\_\_\_%

IC25 reproduction = \_\_\_\_\_%





TABLE 1 (SHEET 4 OF 4)  
 BIOMONITORING REPORTING  
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

\* Coefficient of Variation = standard deviation x 100/mean

1. Is the IC25 for growth less than the critical dilution (100%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
  
2. Is the IC25 for survival less than the critical dilution (100%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
  
3. Enter percent effluent corresponding to each IC25 below:  
 IC25 survival = \_\_\_\_\_%  
 IC25 growth = \_\_\_\_\_%

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 and Outfall 002 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. Within 90 days of initial discharge of the 1.2 MGD Interim II facility, the toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:
  - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
  - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in item b.

## 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
  - 1) The permittee shall collect one composite sample from Outfall 001.
  - 2) The permittee shall collect the composite samples such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
  - 5) The effluent sample shall not be dechlorinated after sample collection.

## 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
  - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

- 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
- d. Enter the following codes for retests only:
  - 1) For retest number 1, Parameter 22415, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For retest number 2, Parameter 22416, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

#### 4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee

shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

- 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
  - d. The permittee shall submit quarterly TRE activities reports concerning the

progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report will also specify a corrective action schedule for implementing the selected control mechanism.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.
- The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.
- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.



TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent

TABLE 2 (SHEET 2 OF 2)  
 FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent



TPDES PERMIT NO.  
WQ0010698002  
[For TCEQ office use only - EPA I.D.  
No. TX0123781]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

This major amendment supersedes and replaces TPDES Permit No. WQ0010698002 issued on April 21, 2017.

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

Upper Trinity Regional Water District

whose mailing address is

P.O. Box 305  
Lewisville, Texas 75067

is authorized to treat and discharge wastes from the Riverbend Regional Water Reclamation Facility, SIC Code 4952

located at 1780 Navo Road, in Denton County, Texas 76227

via Outfall 001 to Lewisville Lake; and via Outfall 002 to an unnamed tributary; thence to Lewisville Lake in Segment No. 0823 of the Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE: January 23, 2023

A handwritten signature in black ink that reads "Erin E. Chamallo".

For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the date of completion of expansion to the 5.7 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 1.5 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,167 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 4.0 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day) Report	7-day Avg mg/l N/A	Daily Max mg/l Report	Single Grab mg/l N/A	Report Daily Avg. & Daily Max. Measurement Frequency Continuous	Sample Type Totalizing Meter
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (63*)	10	20	30	Two/week	Composite
October-March	10 (125*)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (188*)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April-September	1.7 (21*)	5	10	15	Two/week	Composite
October-March	3 (38*)	6	10	15	Two/week	Composite
Total Phosphorus	1 (13*)	2	4	6	Two/week	Composite
<i>E. coli</i> , CFU or MPN** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*This limit applies to discharges made via Outfall 001. See Outfall 002 for the combined lbs/day limit for this pollutant when discharged via Outfall 001 and Outfall 002.

\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l, and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 001

1. During the period beginning upon the date of completion of expansion to the 5.7 million gallons per day (MGD) facility and the date of completion of expansion to the 8.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 1.7 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,722 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 5.7 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day) Report	7-day Avg mg/l N/A	Daily Max mg/l Report	Single Grab mg/l N/A	Report Daily Avg. & Daily Max. Measurement Frequency Continuous	Sample Type Totalizing Meter
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (71*)	10	20	30	Two/week	Composite
October-March	7 (99*)	12	22	32	Two/week	Composite
Total Suspended Solids	15 (213*)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April-September	1 (14*)	4	10	15	Two/week	Composite
October-March	3 (43*)	6	10	15	Two/week	Composite
Total Phosphorus	1 (14*)	2	4	6	Two/week	Composite
<i>E. coli</i> , CFU or MPN** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*This limit applies to discharges made via Outfall 001. See Outfall 002 for the combined lbs/day limit for this pollutant when discharged via Outfall 001 and Outfall 002.

\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once/week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l, and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of completion of expansion to the 8.0 million gallons per day (MGD) facility and the date of completion of expansion to the 10.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 1.7 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,722 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 8.0 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day) Report	7-day Avg mg/l N/A	Daily Max mg/l Report	Single Grab mg/l N/A	Report Daily Avg. & Daily Max. Measurement Frequency Continuous	Sample Type Totalizing Meter
Flow, MGD						
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (71*)	10	20	30	Two/week	Composite
October-March	7 (99*)	12	22	32	Two/week	Composite
Total Suspended Solids	15 (213*)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April-September	1 (14*)	4	10	15	Two/week	Composite
October-March	3 (43*)	6	10	15	Two/week	Composite
Total Phosphorus	1 (14*)	2	4	6	Two/week	Composite
<i>E. coli</i> , CFU or MPN** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*This limit applies to discharges made via Outfall 001. See Outfall 002 for the combined lbs/day limit for this pollutant when discharged via Outfall 001 and Outfall 002.

\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of completion of expansion to the 10.0 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 1.7 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,722 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 10.0 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day) Report	7-day Avg mg/l N/A	Daily Max mg/l Report	Single Grab mg/l N/A	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD					Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (57*)	10	20	30	Two/week	Composite
October-March	7 (99**)	12	22	32	Two/week	Composite
Total Suspended Solids	15 (213**)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April-September	1 (14**)	4	10	15	Two/week	Composite
October-March	3 (43**)	6	10	15	Two/week	Composite
Total Phosphorus	1 (14**)	2	4	6	Two/week	Composite
<i>E. coli</i> , CFU or MPN*** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*See Summation Outfall 003 on Page 2h.

\*\*This limit applies to discharges made via Outfall 001. See Outfall 002 for the combined lbs/day limit for this pollutant when discharged via Outfall 001 and Outfall 002.

\*\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon the date of issuance and lasting through the date of completion of expansion to the 5.7 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 4.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 6,944 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 4.0 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day) Report	7-day Avg mg/l N/A	Daily Max mg/l Report	Single Grab mg/l N/A	Report Daily Avg. & Daily Max. Measurement Frequency Continuous	Sample Type Totalizing Meter
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (167*)	10	20	30	Two/week	Composite
October-March	10 (334*)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (500*)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April-September	1.7 (57*)	5	10	15	Two/week	Composite
October-March	3 (100*)	6	10	15	Two/week	Composite
Total Phosphorus	1 (33*)	2	4	6	Two/week	Composite
<i>E. coli</i> , CFU or MPN** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*This limit applies to discharges made via Outfall 002 and to the combined discharges made via Outfall 001 and Outfall 002.

\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.



INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon the date of completion of expansion to the 5.7 million gallons per day (MGD) facility and the date of completion of expansion to the 8.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 5.7 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 11,111 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 5.7 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (238*)	10	20	30	Two/week	Composite
October-March	7 (333*)	12	22	32	Two/week	Composite
Total Suspended Solids	15 (713*)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April-September	1 (48*)	4	10	15	Two/week	Composite
October-March	3 (143*)	6	10	15	Two/week	Composite
Total Phosphorus	1 (48*)	2	4	6	Two/week	Composite
<i>E. coli</i> , CFU or MPN** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*This limit applies to discharges made via Outfall 002 and to the combined discharges made via Outfall 001 and Outfall 002.

\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon the date of completion of expansion to the 8.0 million gallons per day (MGD) facility and the date of completion of expansion to the 10.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 8.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 17,500 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 8.0 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (334*)	10	20	30	Five/week	Composite
October-March	7 (467*)	12	22	32	Five/week	Composite
Total Suspended Solids	15 (1,001*)	25	40	60	Five/week	Composite
Ammonia Nitrogen						
April-September	1 (67*)	4	10	15	Five/week	Composite
October-March	3 (200*)	6	10	15	Five/week	Composite
Total Phosphorus	N/A(12,176* **)	N/A	2	N/A	Five/week	Composite
<i>E. coli</i> , CFU or MPN*** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*This limit applies to discharges made via Outfall 002 and to the combined discharges made via Outfall 001 and Outfall 002.

\*\*Annual average loading limit and calculated for Outfall 002 based on a 0.5 mg/l daily average.

\*\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored five times per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon the date of completion of expansion to the 10.0 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 10.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 23,056 gallons per minute. The combined annual average flow of Outfalls 001 and 002 shall not exceed 10.0 MGD.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day) Report	7-day Avg mg/l N/A	Daily Max mg/l Report	Single Grab mg/l N/A	Report Daily Avg. & Daily Max. Measurement Frequency Continuous	Sample Type Totalizing Meter
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April-September	5 (334*)	10	20	30	Five/week	Composite
October-March	7 (584**)	12	22	32	Five/week	Composite
Total Suspended Solids	15 (1,251**)	25	40	60	Five/week	Composite
Ammonia Nitrogen						
April-September	1 (83**)	4	10	15	Five/week	Composite
October-March	3 (250**)	6	10	15	Five/week	Composite
Total Phosphorus	N/A(15,220 ** ****)	N/A	2	N/A	Five/week	Composite
<i>E. coli</i> , CFU or MPN**** per 100 ml	126	N/A	399	N/A	Daily	Grab

\*See Summation Outfall 003 on Page 2h.

\*\*This limit applies to discharges made via Outfall 002 and to the combined discharges made via Outfall 001 and Outfall 002.

\*\*\*Annual average loading limit and calculated for Outfall 002 based on a 0.5 mg/l daily average.

\*\*\*\*CFU or MPN - colony forming units or most probable number

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored five times per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 003

1. During the period beginning upon the date of completion of expansion to the 10.0 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The combined annual average flow of effluent shall not exceed 10.0 million gallons per day (MGD).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>	<u>Minimum Self-Monitoring Requirements</u>	
	Daily Average mg/l(lbs/day)	Report Daily Avg. Measurement Frequency	Sample Type
Flow, MGD	Report	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day) April-September	5 (334)	Five/week	Composite

2. Outfall 003 is defined as the combined daily average flow and combined daily average loading from Outfall 001 and Outfall 002.
3. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.

## DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

### 1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

### 2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Compliance Monitoring Team of the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224).



## 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Compliance Monitoring Team of the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

## 9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
  - g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
  - h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
  - i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).
3. Inspections and Entry
- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
  - b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

#### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or

prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or

- iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee;
  - ii. the permit number(s);
  - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iv. the date of filing of the petition.

## **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.



- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
  10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
  11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
    - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
    - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
    - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
    - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

- e. The term “industrial solid waste management unit” means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
  - i. Volume of waste and date(s) generated from treatment process;
  - ii. Volume of waste disposed of on-site or shipped off-site;
  - iii. Date(s) of disposal;
  - iv. Identity of hauler or transporter;
  - v. Location of disposal site; and
  - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

- 12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

#### B. Testing Requirements

1. Sewage sludge or biosolids shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

- a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B biosolids criteria.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.
  - ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.
4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.



Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Biosolids shall be injected below the surface of the land.
  - ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test - annually  
 PCBs - annually

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE OR BIOSOLIDS FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

**D. Notification Requirements**

1. If bulk is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk biosolids will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

**E. Record Keeping Requirements**

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a

period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
  - c. The number of acres in each site on which bulk biosolids are applied.
  - d. The date and time biosolids are applied to each site.
  - e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
  - f. The total amount of biosolids applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **F. Reporting Requirements**

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk biosolids are applied.
  - c. The date and time bulk biosolids are applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
  - e. The amount of biosolids (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record Keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.



1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

##### **A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

##### **B. Record Keeping Requirements**

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge or biosolids transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

### **C. Reporting Requirements**

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

## OTHER REQUIREMENTS

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and, in particular, 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category B facility must be operated by a chief operator or an operator holding a Class B license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. For Outfall 001, chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone. The chronic aquatic life mixing zone is defined as a volume within a radius of 50 feet from the point of discharge. For Outfall 002, there is no mixing zone established for this discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.
4. The permittee has submitted sufficient evidence of legal restrictions from the Army Corps of Engineers prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC § 309.13(e)(3). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment A.)
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, daily may be reduced to 5/week for all phases. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.
7. Prior to construction of the Interim II, Interim III, and Final phase treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary

transmittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications, and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the effluent limitations required on Pages 2a, 2b, 2c, 2e, 2f, and 2g of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

Plans and specifications have been approved for the Interim I 4.0 MGD combined annual average flow wastewater treatment facility, in accordance with 30 TAC § 217, Design Criteria for Domestic Wastewater Systems. A summary transmittal approval letter was issued February 14, 2017 (Log No. 1216/025).

8. The permittee shall notify the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division in writing at least forty-five (45) days prior to the completion of the Interim II, Interim III, and Final phase facilities on Notification of Completion Form 20007.

**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007

**BIOMONITORING REQUIREMENTS****CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER**

The provisions of this section apply to Outfall 001 or Outfall 002 for whole effluent toxicity (WET) testing.

**1. Scope, Frequency, and Methodology**

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. The permittee shall conduct the following toxicity tests using the test organisms, procedures and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
  - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 31%, 42%, 56%, 74%, and 100% effluent. The critical dilution, defined as 74% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction

- 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.
- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

## 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
  - 1) a control mean survival of 80% or greater;
  - 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
  - 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
  - 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
  - 5) a critical dilution CV% of 40 or less for young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test, unless statistically significant toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid;
  - 6) a percent minimum significant difference of 47 or less for water flea reproduction, unless statistically significant sublethal toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid; and
  - 7) a PMSD of 30 or less for fathead minnow growth, unless statistically significant sublethal toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid.
- b. Statistical Interpretation
  - 1) For the water flea survival and reproduction test, the statistical analyses used to determine the inhibition concentration of effluent that would cause a 25% reduction (IC<sub>25</sub>) in survival or mean young per female shall be as described in the methods manual referenced in Part 1.b.



- 2) For the fathead minnow larval survival and growth tests, the statistical analyses used to determine the IC25 in survival or growth shall be as described in the methods manual referenced in Part 1.b.
- 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 4) Most point estimates are derived from a mathematical model that assumes a continuous dose-response relationship. For any test result that demonstrates a non-continuous (threshold) response, or a non-monotonic dose-response relationship, the IC25 should be determined based on the method guidance manual referenced in Item 3.
- 5) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic dose-response relationship may be submitted, prior to the due date, for technical review of test validity and acceptability. The method guidance manual referenced in Item 3 will be used as the basis, along with best professional judgement, for making a determination of test validity and acceptability.

c. Dilution Water

- 1) Dilution water used in the toxicity tests shall be the receiving water collected at a point upstream of the discharge as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:
  - a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or
  - b) use the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;

- b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);
  - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.
- d. Samples and Composites
- 1) The permittee shall collect a minimum of three composite samples from Outfall 001 or 002. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
  - 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If the outfall being sampled ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.
  - 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.

- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
- 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
  - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
  - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
- 1) For the water flea, Parameter T4P3B, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the water flea, Parameter T6P3B, report the IC25 for survival.
  - 3) For the water flea, Parameter T5P3B, enter a "1" if the IC25 for reproduction is less than the critical dilution; otherwise, enter a "0."
  - 4) For the water flea, Parameter T7P3B, report the IC25 for reproduction.
  - 5) For the fathead minnow, Parameter T4P6C, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 6) For the fathead minnow, Parameter T6P6C, report the IC25 for survival.
  - 7) For the fathead minnow, Parameter T5P6C, enter a "1" if the IC25 for growth is less than the critical dilution; otherwise, enter a "0."
  - 8) For the fathead minnow, Parameter T7P6C, report the IC25 for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For retest number 2, Parameter 22416, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. A significant effect is defined as an IC25 of a specified endpoint

(survival, growth, or reproduction) less than the critical dilution. Significant lethality is defined as a survival IC<sub>25</sub> less than the critical dilution. Similarly, significant sublethality is defined as a growth or reproduction IC<sub>25</sub> less than the critical dilution.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

## 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for

both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

- 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;

- 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation which identifies the pollutant(s) and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must

prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.

- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	31%	42%	56%	74%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						

\*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)  
 Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.



TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	31%	42%	56%	74%	100%
24h						
48h						
End of Test						

1. Is the IC25 for reproduction less than the critical dilution (74%)? \_\_\_\_\_ YES  
 \_\_\_\_\_ NO

2. Is the IC25 for survival less than the critical dilution (74%)? \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each IC25 below:

IC25 survival = \_\_\_\_\_%

IC25 reproduction = \_\_\_\_\_%

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
31%							
42%							
56%							
74%							
100%							

\* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)  
 BIOMONITORING REPORTING  
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
31%									
42%									
56%									
74%									
100%									

\* Coefficient of Variation = standard deviation x 100/mean

1. Is the IC25 for growth less than the critical dilution (74%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
2. Is the IC25 for survival less than the critical dilution (74%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
3. Enter percent effluent corresponding to each IC25 below:  
 IC25 survival = \_\_\_\_\_%  
 IC25 growth = \_\_\_\_\_%

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 or 002 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,” fifth edition (EPA-821-R-02-012) or its most recent update:
  - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
  - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in item b.

## 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
  - 1) The permittee shall collect one composite sample from Outfall 001 or 002.
  - 2) The permittee shall collect the composite samples such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If the outfall being sampled ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
  - 5) The effluent sample shall not be dechlorinated after sample collection.

## 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
  - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20<sup>th</sup> for biomonitoring conducted during the previous 6-month period.

- 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
- d. Enter the following codes for retests only:
  - 1) For retest number 1, Parameter 22415, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For retest number 2, Parameter 22416, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

#### 4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
- 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled “Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures” (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled “Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/080) and “Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.



- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report will also specify a corrective action schedule for implementing the selected control mechanism.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.  
  
The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.
- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24-hour LC50 = \_\_\_\_\_% effluent

TABLE 2 (SHEET 2 OF 2)  
 FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

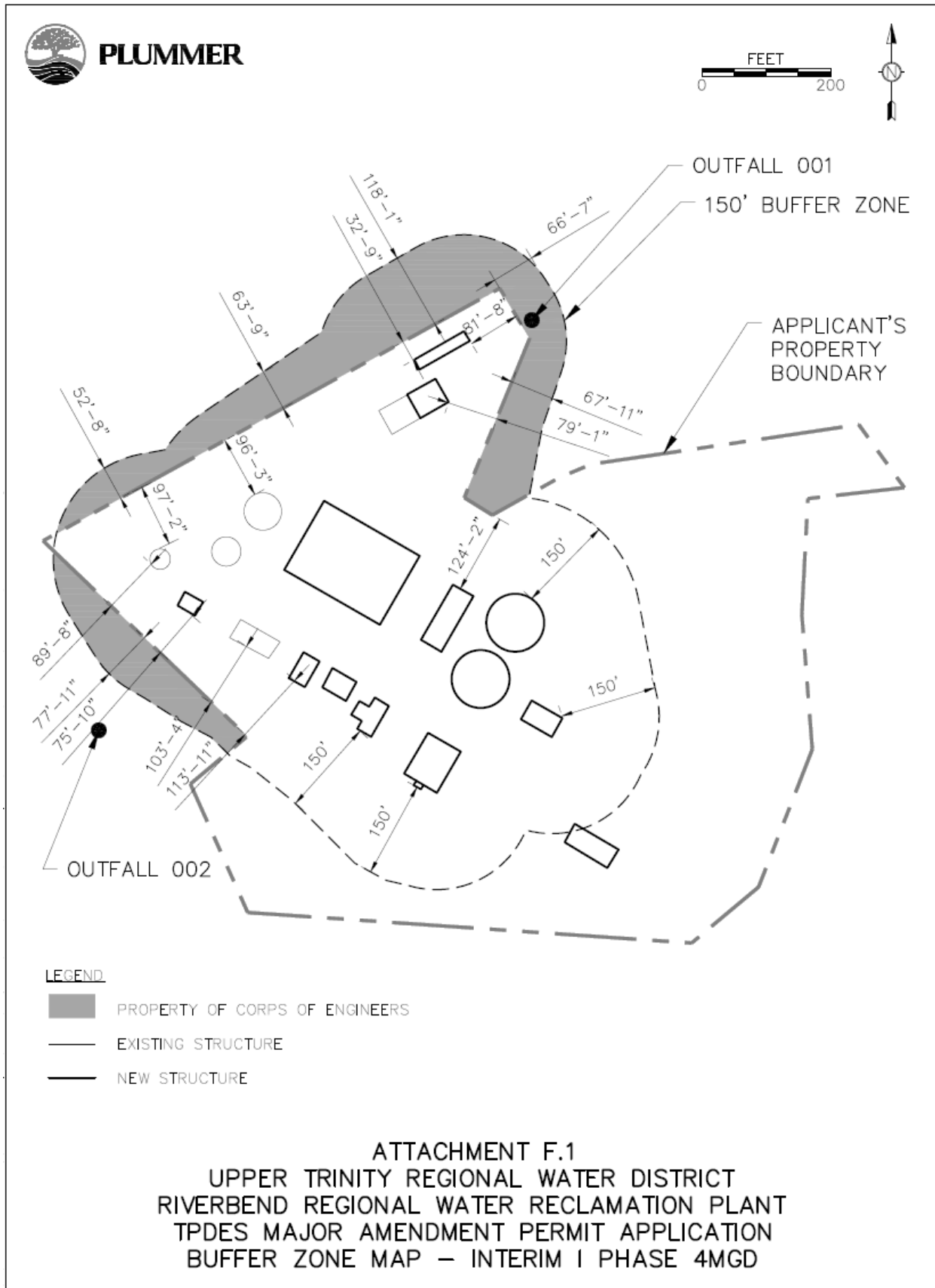
PERCENT SURVIVAL

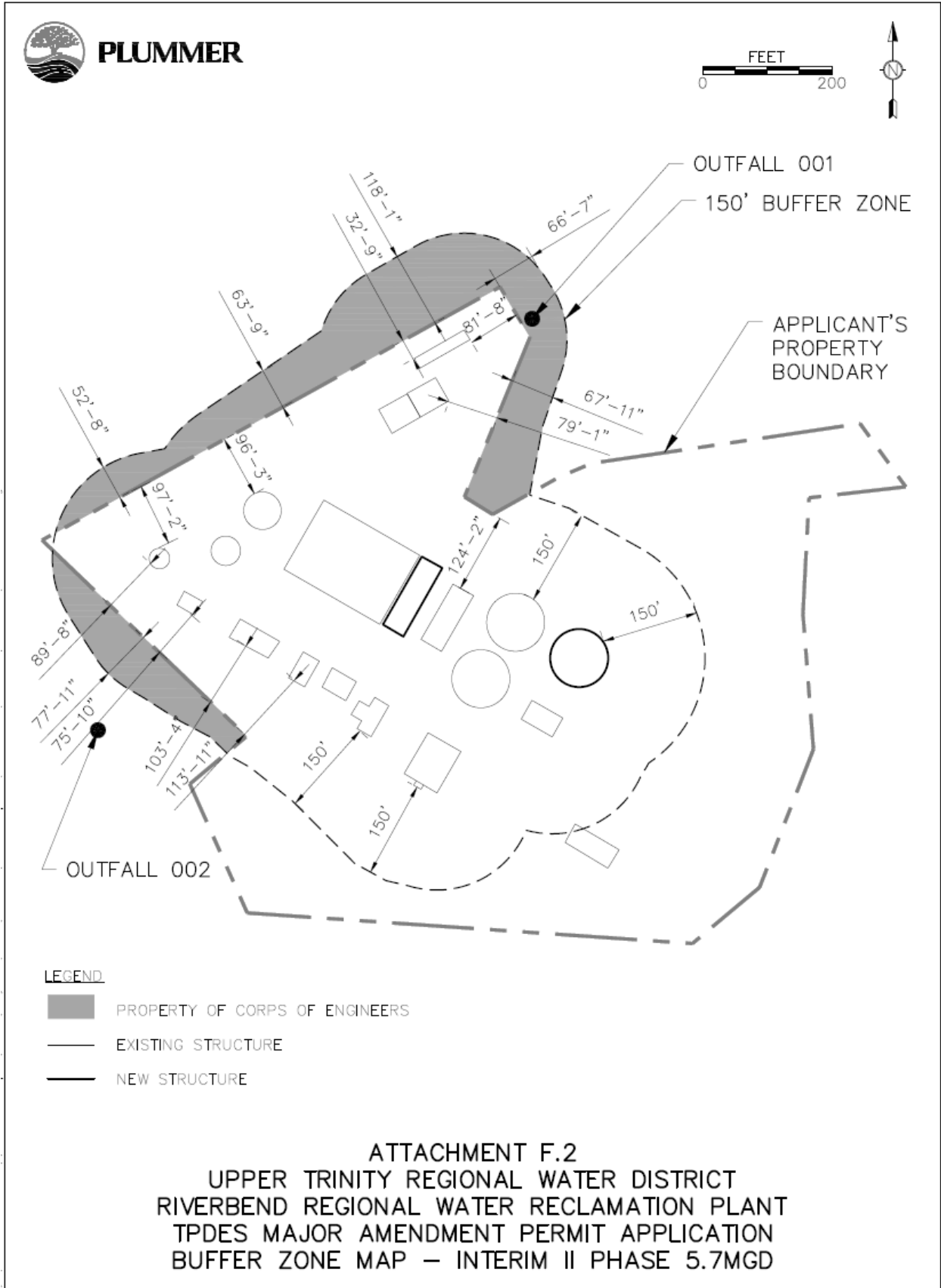
Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

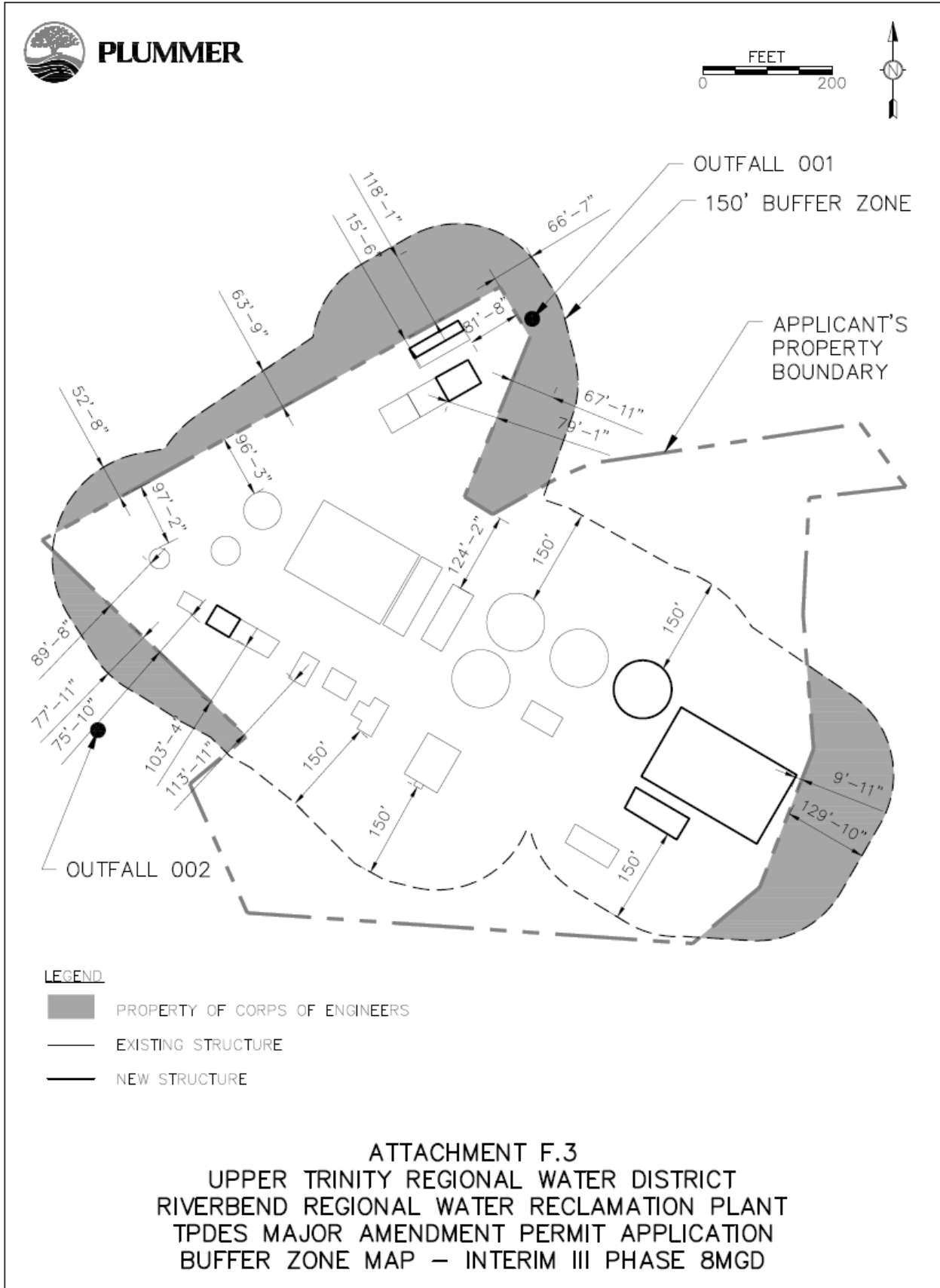
Enter percent effluent corresponding to the LC50 below:

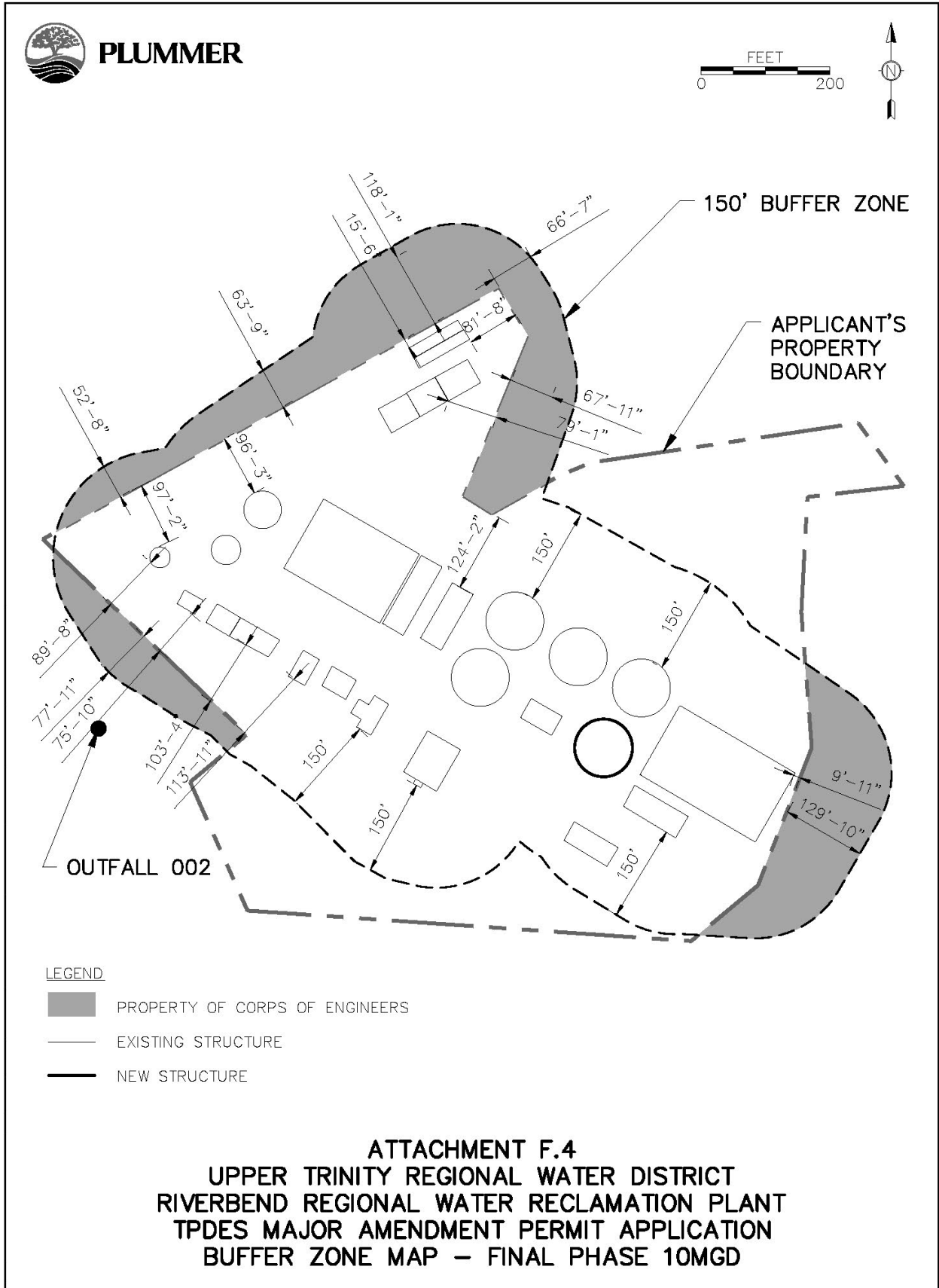
24-hour LC50 = \_\_\_\_\_% effluent

Attachment A









## Sarah Henderson

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**From:** Sarah Henderson  
**Sent:** Tuesday, September 12, 2023 5:25 PM  
**To:** Lauren Kalisek  
**Cc:** Humberto Galvan  
**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A  
**Attachments:** UTRWD\_5778A\_Revised Drafts\_12Sept2023.pdf

Ms. Kalisek,  
Please find the attached, revised red-lined draft public notice and amendment for your review.  
Any additional comments are requested by September 26, 2023.

Feel free to contact me with any questions.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770



Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Kelly Keel, *Interim Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

September 12, 2023

Ms. Lauren Kalisek, Managing Director  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Avenue, Suite 1900  
Austin, Texas 78701

VIA E-MAIL

RE: Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough,  
North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch,  
Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River, Trinity River  
Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise counties

Dear Ms. Kalisek:

This acknowledges receipt, on May 11 and June 14, 2023, of additional information.

Red-lined revised drafts of the public notice and amendment to Water Use Permit No. 5778, and the related technical addenda are attached.

Staff is recommending that the referenced application be granted in accordance with the attached drafts. Please review the drafts and contact me no later than September 26, 2023 with any additional comments or questions as the notice will be forwarded to the Office of the Chief Clerk for mailing after that date.

If you have any questions concerning this matter please contact me via email at [sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov) or by telephone at (512) 239-2535.

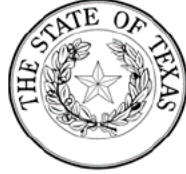
Sincerely,

*Sarah Henderson*

Sarah Henderson, Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Attachments

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River and the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Lakeview WWTP, authorized by TPDES Permit

No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd.

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Regional Water Reclamation Facility (WRFP)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 631.06784 acre-feet per year (0.7563 mgd) of Lake Chapman-derived return flows; authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River; to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and

~~9.8.~~ Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805+4.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and

~~10.9.~~ Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills ~~Water Reclamation Facility~~ (WRF)).

~~WHEREAS,~~ The Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County, ZIP Code 75009; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County, ZIP Code 75068; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County, ZIP Code 75065; and
4. Riverbend Regional WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County, ZIP Code 76227; and
- ~~5.4.~~ Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County, ZIP Code 76227; and
- ~~6.5.~~ City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249; and
- ~~7.6.~~ Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County, in ZIP Code 76266; and
- ~~8.7.~~ City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County, ZIP Code 76227; and
- ~~9.8.~~ Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County, ZIP Code 76227; and
- 10.9. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County, ZIP Code 75009.



The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, ~~June 22,~~ and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018. Additional information was received on April 27, 2021. The application was amended and additional information was received on May 25, ~~and~~ August 31, ~~and 2022~~ December 2, 2022, and May 11 and June 14, 2023.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:

DRAFT

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AMENDMENT TO A  
WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, and Aubrey Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville) and the Elm Fork Trinity River, tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; [Lakeview WWTP](#).

authorized by TPDES Permit No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd; and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown Wastewater Treatment Facility (WWTF)); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend Regional Water Reclamation Facility (WRFP)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 631.06784 acre-feet per year (0.7563 mgd) of Lake Chapman-derived return flows; authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and



7. Aubrey Branch and the Elm Fork Trinity River; to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and
8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805+4.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills ~~Water Reclamation Facility~~ (WRF)); and

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County; and
- ~~4.~~ Riverbend Regional WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County; and
- ~~54.~~ Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County; and
- ~~65.~~ City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and
- ~~76.~~ Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County; and
- ~~87.~~ City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County; and

89. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County; and

109. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity ~~Regional River Water District Reuse of Chapman Lake Water~~ Accounting System Plan Detailed Documentation*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. Permittee is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River to convey not to exceed the following amounts of Lake Chapman-derived surface water-based return flows for municipal and industrial purposes in Permittee's service area:

1. 16,805 acre-feet per year discharged from the City of Celina's Downtown WWTF, authorized by TPDES Permit No. WQ0014246001, as amended.

~~2.~~ 22,406 acre-feet per year discharged from UTRWD's Doe Branch Regional WRP, authorized by TPDES Permit No. WQ0010698003, as amended.

~~2-3.~~ 8,402 acre-feet per year discharged from UTRWD's Lakeview Regional WRP, authorized by TPDES Permit No. WQ0010698001, as amended.

~~3-4.~~ 11,203 acre-feet per year discharged from UTRWD's Riverbend Regional WRP, authorized by TPDES Permit No. WQ0010698002, as amended.

~~4-5.~~ 5,153 acre-feet per year discharged from UTRWD's Peninsula Regional WRP, authorized by TPDES Permit No. WQ0014323001, as amended.

~~5-6.~~ ~~784631.06~~ acre-feet per year discharged from the City of Krum's WWTF, authorized by TPDES Permit No. WQ0010729001, as amended.

~~6-7.~~ 2,084 acre-feet per year discharged from the City of Sanger's WWTF, authorized by TPDES Permit No. WQ0014372001, as amended.

~~7-8.~~ 616 acre-feet per year discharged by the City of Aubrey's WWTF, authorized by TPDES Permit No. WQ0013647001.

~~8-9.~~ 16,814.2838 acre-feet per year discharged from the Mustang Special Utility District's Sandbrock WWTF, authorized by TPDES Permit No. WQ0015536001.

~~9-10.~~ 16,805 acre-feet per year discharged by the City of Celina Legacy Hills WRF by under TPDES Permit No. WQ0016068001.

- B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

## 2. DISCHARGE POINTS AND RATES

Lake Chapman-derived return flows under this amendment will be discharged at the following locations and rates in the Trinity River Basin:

A. Celina Downtown WWTF, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County.

B. Doe Branch Regional WRP, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County.

B-C. Lakeview Regional WRP, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville) located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County.

~~E.D.~~ Riverbend Regional WRF, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville) located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County.

~~D.E.~~ Peninsula Regional WRF, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County.

~~E.F.~~ City of Krum WWTF, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County.

~~F.G.~~ Sanger WWTF, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County.

~~H.G.~~ City of Aubrey WWTF, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County.

~~I.~~ Sandbrock WWTF, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County.

~~I.~~ Celina Legacy Hills WRF, at a maximum 2-hour rate of 92.83 cfs (41,667 gm), at a point on Little Elm Creek located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County.

### 3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

### 4. SPECIAL CONDITIONS

A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778.

B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.

C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan.



This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.

E.D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water—Accounting Plan System Detailed Documentation*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.

F.E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.

G.F. Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, WQ0014372001, WQ0010698002, ~~and be granted TPDES Permit No. WQ0016068001.~~ Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits or amendments are not granted.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

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For the Commission

Date Issued:

**Texas Commission on Environmental Quality**

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INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager  
Water Rights Permitting Team

Date: July 20, 2023

Through: ~~K~~ Kathy Alexander, Ph.D., Policy and Technical Analyst  
Water Availability Division

TA Trent Gay, Team Leader  
Surface Water Availability Team

From: Andrew Garcia, Hydrologist  
Surface Water Availability Team

Subject: Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork  
Trinity River (Lake Lewisville), Trinity River Basin  
Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant Counties

**HYDROLOGY REVIEW ADDENDUM**

**Review and Conclusions**

Staff completed its hydrology review memorandum on November 17, 2021, and a subsequent hydrology review addendum on September 14, 2022. On May 11, 2023, UTRWD submitted a revised accounting plan (Upper Trinity Regional Water District Reuse Accounting System Detailed Documentation) that more accurately reflects the discharge and diversions of Lake Chapman-derived return flows. The accounting plan was subsequently reviewed, and a final version was submitted on June 14, 2023. Staff reviewed the accounting plan and found it to be acceptable. Staff recommends that the amended application be granted, that staff's previous recommendations be retained in the revised amendment, except for Paragraph 4.D. which should be revised as described below.

In lieu of Paragraph 4.D.

Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (Upper Trinity Regional Water District Reuse Accounting System Detailed Documentation). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to

the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.



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Andrew Garcia, Hydrologist

## Sarah Henderson

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**From:** Andrew Garcia  
**Sent:** Thursday, July 20, 2023 3:47 PM  
**To:** Sarah Henderson  
**Subject:** FW: UTRWD Accounting System  
**Attachments:** Exhibit\_Accounting\_Tables\_20230614.xlsx; Detailed\_Accounting\_Documentation\_20230614.pdf

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**From:** McCann, Cody [REDACTED]  
**Sent:** Wednesday, June 14, 2023 10:22 AM  
**To:** Kathy Alexander <kathy.alexander@tceq.texas.gov>; Andrew Garcia <Andrew.Garcia@Tceq.Texas.Gov>  
**Cc:** 'Ronna Hartt' [REDACTED]; Lauren Kalisek [REDACTED]; McDonald, Ellen [REDACTED]  
**Subject:** UTRWD Accounting System

Kathy and Andrew,

Please see the attached updated Upper Trinity Regional Water District Reuse Accounting System and documentation. Both have been updated to reflect the TCEQ's comments from our meeting on June 12, 2023.

Please let us know if you have any additional comments or questions.

Thank you,

**Cody McCann, EIT**  
*Engineer in Training*  
Plummer

**P:** 817.806.1700

**D:** 817.806.1776

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# UPPER TRINITY REGIONAL WATER DISTRICT

## REUSE ACCOUNTING SYSTEM

### DETAILED DOCUMENTATION

Last Revised: June 14, 2023

#### **Introduction**

The purpose of this document is to provide a detailed explanation of each calculation contained in the Upper Trinity Regional Water District Reuse Accounting System. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

The District owns and operates two water treatment facilities, the Tom Taylor Regional Water Treatment Plant (RWTP or TT RWTP), which diverts water from Lewisville Lake and the Tom Harpool WTP (Harpool WTP or HWTP) which receives raw water from Chapman Lake directly via a pipeline.

#### **Input Tables**

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

##### ***Table I-1***

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L_RWTP):</i>	Losses between RWTP intake and RWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.

**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Treated CLW from HWTP (at WTP)</i>	Amount of treated Chapman Lake Water leaving the Harpool WTP. Metered value.
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.
<i>[TT] Mustang (Temple Dane)</i>	Amount of treated water delivered to the Temple Dane Pump Station from the Regional WTP.
<i>[HP] Mustang (Temple Dane)</i>	Amount of treated water delivered to the Temple Dane Pump Station from the Harpool WTP.

**Table I-2\_TT**

This spreadsheet contains all the same information and is the same as Table I-2 except that only customers who are supplied water from the RWTP's daily input values are shown. Customers who receive water from sources other than the RWTP are zeroed out. The addition of this table is necessary to determine how much Chapman Lake water delivered to customers is water from the RWTP.

**Table I-3**

This spreadsheet contains all daily input of measured discharges and any direct or indirect reuse losses from all District or customer wastewater treatment plants (WWTPs) participating in the UTRWD Reuse program (shown in the summary table below). There are three columns of input data for each WWTP. A description of each column is provided below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Measured Discharge</i>	Total amount of treated wastewater discharged from WWTP. Metered value.
<i>Direct Reuse Losses</i>	Any direct diversion of treated wastewater for direct reuse to a user (e.g. for irrigation) between the Measured Discharge meter location and the discharge. Metered value.
<i>Indirect Reuse Losses</i>	Any authorized diversion of treated wastewater (for indirect reuse) following discharge, not associated with this water right. Metered value.

Average daily discharge, from each WWTP, obtained from metered values, will be entered in the appropriate cells on this table. Discharge data is only required for those WWTPs that contribute return flows subsequently used by the District as part of the program.

**WWTPs Included in the Accounting Plan**

<b>WWTP</b>	<b>Permitted Average Daily Flow* (MGD)</b>
<i>Lakeview Regional WWTP</i>	7.5
<i>Riverbend Regional WWTP</i>	10.0
<i>Peninsula Regional WWTP</i>	4.6
<i>Doe Branch Regional WWTP</i>	20.0
<i>Aubrey WWTP</i>	0.55
<i>Celina Downtown WWTP</i>	15.0
<i>Celina Legacy Hills WWTP</i>	15.0
<i>Krum WWTP</i>	0.7
<i>Sandbrock WWTP</i>	15.0
<i>Sanger WWTP</i>	1.86

\*Permits have been issued by TCEQ or are in the amendment/application process.

**Calculation Tables**

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs (both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

**Table C-1**

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
CLW	C1-1	District's portion of Chapman Lake Water (from Table I-2, Column 3)

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Diverted Directly to Harpool WTP</i>	C1-2	Amount of Chapman Lake water diverted directly to the Harpool WTP (from Table I-2, Column 4)
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District's portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L_Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch. Computed quantity.
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District's portion of Chapman Lake water within Doe Branch. Computed quantity.
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 8).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 6)

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Total CLW Available for Distribution from both WTPs (at WTP)</i>	C1-7a	Total amount of Chapman Lake water available for distribution to Chapman Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 7).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to All "Case TT" Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to RWTP water customers. Sum of daily metered values for RWTP water customer meters, obtained from Table I-2 TT.
<i>Total RWTP Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied from the RWTP to Chapman Lake water customers. Sum of daily metered values from RWTP Chapman water customer meters, obtained from Table I-2_TT (does not include other water customers).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at WTP)</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (e.g., Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLW and CLRW (at WTP)</i>	C1-11ab1	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP). (Col. [11a] + Col. [11b])
<i>Unutilized CLW and CLRW (at Lake)</i>	C1-11ab2	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to intake). (Col. [11ab1]/(1-col. [6c]))
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers; Tom Taylor</i>	C1-12_TT	Percentage of Chapman Lake water supplied to each RWTP Chapman Lake water customer. Computed quantity.



<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>[TT] Mustang (Temple Dane) MeterID 22</i>	C1-12a	Amount of treated water delivered to the Temple Dane Pump Station from the RWTP. Measured at District's MeterID 22 (from Table I-2, Col. 11).
<i>[HP] Mustang (Temple Dane) MeterID 44</i>	C1-12b	Amount of treated water delivered to the Temple Dane Pump Station from the Harpool WTP. Measured at District's MeterID 44 (from Table I-2, Col. 12).
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers; Temple Dane</i>	C1-12_TD	Percentage of Chapman Lake water supplied to the Temple Dane Pump Station. Computed quantity.
<i>Amount of Water Purchased by District from Dallas</i>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<i>Amount of Water Purchased by District from Denton</i>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<i>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</i>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake). Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<i>Chapman Lake Reuse Water used by District</i>	C1-15c	Amount of Chapman Lake Reuse Water used by District customers. Computed quantity.
<i>Available Chapman Lake Reuse Water (CLRW) (at WTP)</i>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<i>Potential CLRW Used by CL Customers</i>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] – [C1-10c]. Otherwise, equal to zero.
<i>CLRW Used by CL Customers</i>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Total Raw Water Withdrawal minus CLRW</i>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.
<i>Potential New CLW Withdrawal in RWTP (only if less than RWTP Customer CLW Demand)</i>	C1-19	Interim calculation. If [C1-18] is less than new CLW available from the RWTP, then equal to [C1-18]. Otherwise, equal to new CLW available ([C1-7a1]).
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.
<i>CLW + CLRW Available for Withdrawal by District (at intake)</i>	C1-15b	Amount of total CLW and CLRW available for supply to water customers.

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge from Customer (CWRF)</i>	C2-21	Portion of Chapman Lake water return flow in WWTP discharge attributed to this particular customer.
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer (from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake. Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRF less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRP)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.
<i>Direct/Indirect Reuse Losses</i>	C3-30	Amount of Chapman Lake water lost to direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

## Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.

## **Doe Branch Stream Distance Table**

This table provides an estimate of stream distance from the point where Chapman Lake water is discharged into Doe Branch (upstream of Lewisville Lake) to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses in Doe Branch. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

## **Stream Distance Lookup Table**

This table provides an estimate of stream distance from the point of discharge of each WWTP to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses from the discharge location to the lake. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

## **Lake Lewisville Elevation**

This table provides a daily calculation of Doe Branch Losses using the Lewisville Lake Water Surface Elevation and the Doe Branch Channel Length. The Doe Branch Channel Length is the length of Doe Branch between the point of Chapman water discharge and Lewisville Lake. These values were previously calculated on a monthly time-step using only the elevation of the lake at the beginning of the month.

## Sarah Henderson

---

**From:** Ronna Hartt [REDACTED]  
**Sent:** Friday, June 2, 2023 1:35 PM  
**To:** Sarah Henderson  
**Cc:** Larry N. Patterson, Executive Director; Lauren J. Kalisek - Lloyd Gosselink Rochelle & Townsend, P.C. ([REDACTED] McDonald, Ellen  
**Subject:** UTRWD - Water Right Permit Amendment 5778A

Sarah,

Please accept this email as UTRWD's notification to TCEQ of a change in our legal representation related to Water Right Permit Amendment 5778A.

Lauren Kalisek with Lloyd Gosselink will now be handling this for us. Her contact information is below.

Please let me know if you have any questions.

Thank you,

Ronna

### **LAUREN KALISEK**

Managing Director

512-322-5847 Direct

Lloyd Gosselink Rochelle & Townsend, P.C.

816 Congress Ave., Suite 1900, Austin, TX 78701

[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800

### **Ronna P. Hartt, P.E.**

#### **Assistant Director of Operations – Water Resources**

Upper Trinity Regional Water District

PO Drawer 305 | Lewisville, TX 75067

T: 972-219-1228 | M: 239-425-5928

[REDACTED] | [www.utrwd.com](http://www.utrwd.com)

## Sarah Henderson

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, May 11, 2023 3:03 PM  
**To:** Sarah Henderson  
**Cc:** Kathy Alexander; Brooke McGregor; Ronna P. Hartt ([REDACTED]); Larry Patterson; McDonald, Ellen; McCann, Cody; Lauren Kalisek  
**Subject:** UTRWD Revised Accounting System (WRPERM 5778/5778A)  
**Attachments:** J. Aldredge ltr to S. Henderson re Accounting System 05.11.2023.PDF; TCEQ-Transmittal\_memo\_2023-04-27.pdf; Exhibit\_Accounting\_Tables\_20230427.xlsx; Detailed\_Accounting\_Documentation\_20230427.pdf; Detailed\_Accounting\_Documentation\_20230427.doc

Sarah,

Please see the attached correspondence and attachments related to my conversation with Kathy and Brooke on March 23. Please do not hesitate to contact me if you have any questions.

Thanks,  
James

### JAMES ALDREDGE

Principal

512-322-5859 Direct

512-656-5104

Lloyd Gosselink Rochelle & Townsend, P.C.

816 Congress Ave., Suite 1900, Austin, TX 78701

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May 11, 2023

Sarah Henderson  
Project Manager, Water Rights Permitting Team  
Texas Commission on Environmental Quality (MC 160)  
P.O. Box 13087  
Austin, Texas 78711-3087

Re: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise Counties

Dear Ms. Henderson:

Pursuant to discussions with Kathy Alexander and Brooke McGregor on March 23, 2023, Upper Trinity Regional Water District (“UTRWD”) respectfully submits the enclosed modified Accounting System related to UTRWD’s application to amend Water Use Permit No. 5778. The amended Accounting System is necessary to enable UTRWD to divert return flows authorized under the proposed amendment to Water Use Permit No. 5778 at both of UTRWD’s drinking water treatment plants. This change is consistent with UTRWD’s original intent in seeking the proposed amendment.

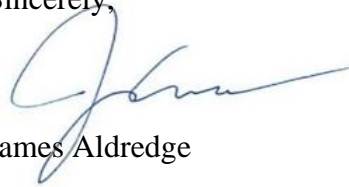
In addition to amending the pending application for Water Use Permit No. 5778A, UTRWD is hereby notifying TCEQ of the Accounting System revisions under the existing Special Condition 6.E. in Water Use Permit No. 5778 (“Permit 5778”). That condition authorizes UTRWD to modify the Accounting System (identified in Permit 5778 as the “Accounting Plan”) from time to time in accordance with the Pass-Through Agreements with the Cities of Dallas, Denton, and Lewisville. UTRWD intends to begin operations under the modified Accounting System.

May 11, 2023

Page 2

If you have any questions regarding this request, please do not hesitate to contact me at (512) 322-5859.

Sincerely,

A handwritten signature in blue ink, appearing to read "James Aldredge". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

James Aldredge

Copy: Kathy Alexander, Water Availability Division  
Brooke McGregor, Water Availability Division  
Larry Patterson, UTRWD  
Ronna Hartt, UTRWD  
Ellen McDonald, Plummer  
Cody McCann, Plummer  
Lauren Kalisek, of the Firm

Enclosures



**Subject:** Third Supplement to Application to Amend Permit No. 5778: Modifications to Accounting System

**Project No:** 0468-038-02

**Date:** April 27, 2023

**Prepared For:** TCEQ Water Availability Division

**Prepared By:** Cody McCann, EIT, Plummer  
Ellen McDonald, PhD, PE, Plummer

**Cc:** Larry Patterson, PE, Upper Trinity Regional Water District  
Ronna Hartt, PE, Upper Trinity Regional Water District  
James Aldredge, Lloyd Gosselink

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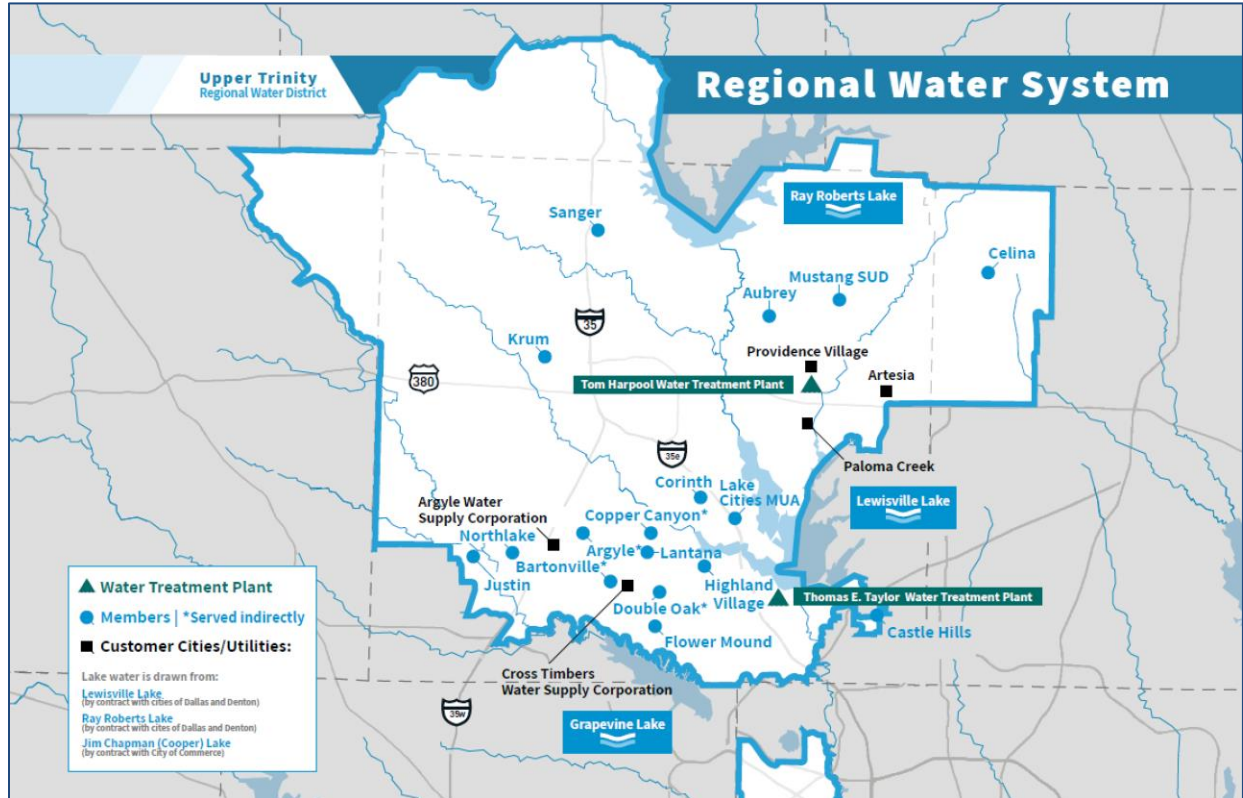
This third supplement (April 2023) to the Application to amend Permit No. 5778 includes revisions to the accounting system that more accurately reflect how water is distributed to and used by Upper Trinity Regional Water District (“UTRWD”) customers. The accounting system has been renamed to the “UTRWD Reuse Accounting System” in anticipation of future modifications that will include return flows originating with Lake Ralph Hall or other future water sources. It is UTRWD’s intent to maintain one reuse accounting system that tracks all of its indirect reuse water rights.

### 1 BACKGROUND INFORMATION

When the initial Application for Permit No. 5778 was submitted, UTRWD only operated one water treatment plant, the Tom Taylor Water Treatment Plant (WTP). The Tom Taylor WTP is located on Lewisville Lake and diverts raw water directly from the lake. In 2009, UTRWD began operation of a new water treatment plant, the Tom Harpool WTP, located north of Lewisville Lake (**Figure 1**).

The Tom Harpool WTP receives water directly from a transmission pipeline that delivers water from Chapman Lake to Lewisville Lake and serves customers in the northern portion of the District’s service area. Initially, flows to the Tom Harpool WTP were small and for purposes of reuse accounting, the District conservatively treated the new WTP as if it were an expansion of the Tom Taylor WTP. Thus, for accounting purposes, water from the Tom Harpool WTP was assumed to be blended with other water from Lewisville Lake (associated with Dallas and Denton water rights) prior to being distributed to customers. The impact of this accounting configuration is that UTRWD has not been getting the full benefit of return flows originating from Chapman Lake, for customers that receive water from the Tom Harpool WTP. With the significant growth that has occurred and is anticipated to continue in the District’s northern service area, UTRWD would like to get the full benefit and credit for these return flows and is proposing a minor modification to the accounting system that accurately reflects how the water is distributed and used in the system. This change will also allow the accounting system to transition to accommodating imports from the future Lake Ralph Hall, which will be delivered through the same pipeline to the Tom Harpool WTP and/or Lewisville Lake.

Figure 1: UTRWD Regional Water System



## 2 SUMMARY OF ACCOUNTING SYSTEM MODIFICATIONS

The proposed modifications to the accounting system are included in the attached revised UTRWD Reuse Accounting System (spreadsheet file and described in the associated revised Accounting System Detailed Documentation (Word document). A summary of these changes is provided below:

- The accounting system now tracks water delivered to each WTP separately and tracks metered delivery to each customer from both WTP sources. Some customers (e.g. Mustang Special Utility District) can receive water from either WTP. In these cases, metered deliveries from each WTP are tracked and reuse water rights are accounted for based on the proportion of supply from each plant.
- The accounting system was also modified to track Doe Branch stream losses daily, rather than monthly. A new table was added that uses daily Lewisville Lake elevations to calculate stream losses in Doe Branch. This change is unrelated to the changes described above, but provides for more accurate accounting of Doe Branch losses on a daily basis.

# UPPER TRINITY REGIONAL WATER DISTRICT

## REUSE ACCOUNTING SYSTEM

### DETAILED DOCUMENTATION

Last Revised: April 27, 2023

#### **Introduction**

The purpose of this document is to provide a detailed explanation of each calculation contained in the Upper Trinity Regional Water District Reuse Accounting System. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

The District owns and operates two water treatment facilities, the Tom Taylor Regional Water Treatment Plant (RWTP or TT RWTP), which diverts water from Lewisville Lake and the Tom Harpool WTP (Harpool WTP or HWTP) which receives raw water from Chapman Lake directly via a pipeline.

#### **Input Tables**

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

#### ***Table I-1***

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L_RWTP):</i>	Losses between RWTP intake and RWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
	Length of Doe Branch between point of Chapman water discharge and Lewisville Lake. Updated as Lewisville Lake water surface elevation changes, using automatic lookup to Doe Branch Stream Distance Table (attached). Data in this table will be augmented by surveying or other appropriate data collection methods when water level falls below 515 ft.
	Computed Doe Branch losses, expressed as percentage of Chapman water entering Doe Branch. Computed as <i>Assumed Doe Branch Losses, %/mile x Doe Branch Channel Length, miles</i> .
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.

**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Treated CLW from HWTP (at WTP)</i>	Amount of treated Chapman Lake Water leaving the Harpool WTP. Metered value.
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.
<i>[TT] Mustang (Temple Dane)</i>	Amount of treated water delivered to the Temple Dane Pump Station from the Regional WTP.
<i>[HP] Mustang (Temple Dane)</i>	Amount of treated water delivered to the Temple Dane Pump Station from the Harpool WTP.

**WWTPs Included in the Accounting Plan**

<b>WWTP</b>	<b>Permitted Average Daily Flow* (MGD)</b>
<i>Lakeview Regional WWTP</i>	7.5
<i>Riverbend Regional WWTP</i>	10.0
<i>Peninsula Regional WWTP</i>	4.6
<i>Doe Branch Regional WWTP</i>	20.0
<i>Aubrey WWTP</i>	0.55
<i>Celina Downtown WWTP</i>	15.0
<i>Celina Legacy Hills WWTP</i>	15.0
<i>Krum WWTP</i>	0.7
<i>Sandbrock WWTP</i>	15.0
<i>Sanger WWTP</i>	1.86

\*Permits have been issued by TCEQ or are in the amendment/application process.

**Calculation Tables**

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs (both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

**Table C-1**

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
CLW	C1-1	District's portion of Chapman Lake Water (from Table I-2, Column 3)
<i>CLW Diverted Directly to</i>	C1-2	Amount of Chapman Lake water diverted



<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Harpool WTP</i>		directly to the Harpool WTP (from Table I-2, Column 4)
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District's portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L_Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch. Computed quantity.
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District's portion of Chapman Lake water within Doe Branch. Computed quantity.
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 8).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 6)
<i>Total CLW Available for</i>	C1-7a	Total amount of Chapman Lake water

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Distribution from both WTPs (at WTP)</i>		available for distribution to Chapman Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 7).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to All "Case TT" Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to RWTP water customers. Sum of daily metered values for RWTP water customer meters, obtained from Table I-2 TT.
<i>Total RWTP Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied from the RWTP to Chapman Lake water customers. Sum of daily metered values from RWTP Chapman water customer meters, obtained from Table I-2_TT (does not include other water customers).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>WTP)</i>		
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (e.g., Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLW and CLRW (at WTP)</i>	C1-11ab1	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP). (Col. [11a] + Col. [11b])
<i>Unutilized CLW and CLRW (at Lake)</i>	C1-11ab2	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to intake). (Col. [11ab1]/(1-col. [6c]))
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers; Tom Taylor</i>	C1-12_TT	Percentage of Chapman Lake water supplied to each RWTP Chapman Lake water customer. Computed quantity.
<i>[TT] Mustang (Temple Dane) MeterID 22</i>	C1-12a	Amount of treated water delivered to the Temple Dane Pump Station from the RWTP. Measured at District's MeterID 22 (from Table I-2, Col. 11).
<i>CLW in MeterID 22</i>	C1-12a1	Percentage of Chapman Lake Water in

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
		Meter ID 22 supplied water. Computed quantity.
<i>[HP] Mustang (Temple Dane) MeterID 44</i>	C1-12b	Amount of treated water delivered to the Temple Dane Pump Station from the Harpool WTP. Measured at District's MeterID 44 (from Table I-2, Col. 12).
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers; Temple Dane</i>	C1-12_TD	Percentage of Chapman Lake water supplied to the Temple Dane Pump Station. Computed quantity.
<i>Amount of Water Purchased by District from Dallas</i>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<i>Amount of Water Purchased by District from Denton</i>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<i>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</i>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake). Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<i>Chapman Lake Reuse Water used by District</i>	C1-15c	Amount of Chapman Lake Reuse Water used by District customers. Computed quantity.
<i>Available Chapman Lake Reuse Water (CLRW) (at WTP)</i>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<i>Potential CLRW Used by CL Customers</i>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] – [C1-10c]. Otherwise, equal to zero.
<i>CLRW Used by CL Customers</i>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.
<i>Total Raw Water Withdrawal minus CLRW</i>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Potential New CLW Withdrawal in RWTP (only if less than RWTP Customer CLW Demand)</i>	C1-19	Interim calculation. If [C1-18] is less than new CLW available from the RWTP, then equal to [C1-18]. Otherwise, equal to new CLW available ([C1-7a1]).
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.
<i>CLW + CLRW Available for Withdrawal by District (at intake)</i>	C1-15b	Amount of total CLW and CLRW available for supply to water customers.

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge</i>	C2-21	Portion of Chapman Lake water return

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>from Customer (CWRP)</i>		flow in WWTP discharge attributed to this particular customer.
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer (from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake. Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRP less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRP)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to

FIELD	COLUMN #	DESCRIPTION
		channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.
<i>Direct/Indirect Reuse Losses</i>	C3-30	Amount of Chapman Lake water lost to direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

## Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.



## **Doe Branch Stream Distance Table**

This table provides an estimate of stream distance from the point where Chapman Lake water is discharged into Doe Branch (upstream of Lewisville Lake) to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses in Doe Branch. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

## **Stream Distance Lookup Table**

This table provides an estimate of stream distance from the point of discharge of each WWTP to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses from the discharge location to the lake. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

## **Lake Lewisville Elevation**

This table provides a daily calculation of Doe Branch Losses using the Lewisville Lake Water Surface Elevation and the Doe Branch Channel Length. The Doe Branch Channel Length is the length of Doe Branch between the point of Chapman water discharge and Lewisville Lake. These values were previously calculated on a monthly time-step using only the elevation of the lake at the beginning of the month.

**UPPER TRINITY REGIONAL WATER DISTRICT**  
**REUSE ~~ACCOUNTING SYSTEM OF CHAPMAN LAKE WATER~~**  
**~~ACCOUNTING PLAN~~ DETAILED DOCUMENTATION**

Last Revised: ~~April 27, 2023~~ ~~May 23, 2022~~

## Introduction

The purpose of this document is to provide a detailed explanation of each calculation contained in the [Upper Trinity Regional Water District Reuse Chapman Water Accounting System Plan](#). This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

[The District owns and operates two water treatment facilities, the Tom Taylor Regional Water Treatment Plant \(RWTP or TT RWTP\), which diverts water from Lewisville Lake and the Tom Harpool WTP \(Harpool WTP or HWTP\) which receives raw water from Chapman Lake directly via a pipeline.](#)

## Input Tables

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

### **Table I-1**

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L_RWTP):</i>	Losses between RWTP intake and RWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
<del><i>Doe Branch Channel Length, miles</i></del>	Length of Doe Branch between point of Chapman water discharge and Lewisville Lake. Updated as Lewisville Lake water surface elevation changes, using automatic lookup to Doe Branch Stream Distance Table (attached). Data in this table will be augmented by surveying or other appropriate data collection methods when water level falls below 515 ft.
<del><i>Doe Branch Losses (L_Doe)</i></del>	Computed Doe Branch losses, expressed as percentage of Chapman water entering Doe Branch. Computed as <i>Assumed Doe Branch Losses, %/mile</i> x <i>Doe Branch Channel Length, miles</i> .
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.

**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Treated CLW from HWTP (at WTP)</i>	Amount of treated Chapman Lake Water leaving the Harpool WTP. Metered value.
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.
<u><i>[TT] Mustang (Temple Dane)</i></u>	<u>Amount of treated water delivered to the Temple Dane Pump Station from the Regional WTP.</u>
<u><i>[HP] Mustang (Temple Dane)</i></u>	<u>Amount of treated water delivered to the Temple Dane Pump Station from the Harpool WTP.</u>

**Table I-2 TT**

This spreadsheet contains all the same information and is the same as Table I-2 except that only customers who are supplied water from the RWTP's daily input values are shown. Customers who receive water from sources other than the RWTP are zeroed out. The addition of this table is necessary to determine how much Chapman Lake water delivered to customers is water from the RWTP.

**Table I-3**

This spreadsheet contains all daily input of measured discharges and any direct or indirect reuse losses from all District or customer wastewater treatment plants (WWTPs) participating in the ~~UTRWD~~Chapman Reuse program (shown in the summary table below). There are three columns of input data for each WWTP. A description of each column is provided below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Measured Discharge</i>	Total amount of treated wastewater discharged from WWTP. Metered value.
<i>Direct Reuse Losses</i>	Any direct diversion of treated wastewater for direct reuse to a user (e.g. for irrigation) between the Measured Discharge meter location and the discharge. Metered value.
<i>Indirect Reuse Losses</i>	Any authorized diversion of treated wastewater (for indirect reuse) following discharge, not associated with this water right. Metered value.

Average daily discharge, from each WWTP, obtained from metered values, will be entered in the appropriate cells on this table. Discharge data is only required for those WWTPs that contribute return flows subsequently used by the District as part of the program.

**WWTPs Included in the Accounting Plan**

<b>WWTP</b>	<b>Permitted Average Daily Flow* (MGD)</b>
<i>Lakeview Regional WWTP</i>	7.5
<i>Riverbend Regional WWTP</i>	10.0
<i>Peninsula Regional WWTP</i>	4.6
<i>Doe Branch Regional WWTP</i>	20.0
<i>Aubrey WWTP</i>	0.55
<i>Celina Downtown WWTP</i>	15.0
<i>Celina Legacy Hills WWTP</i>	15.0
<i>Krum WWTP</i>	0.7
<i>Sandbrock WWTP</i>	15.0
<i>Sanger WWTP</i>	1.86

\*Permits have been issued by TCEQ or are in the amendment/application process.

**Calculation Tables**

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs (both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

**Table C-1**

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
CLW	C1-1	District's portion of Chapman Lake Water (from Table I-2, Column 3)
<i>CLW Diverted Directly to</i>	C1-2	Amount of Chapman Lake water diverted

FIELD	COLUMN #	DESCRIPTION
<i>Harpool WTP</i>		directly to the <del>future</del> Harpool WTP (from Table I-2, Column 4)
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District's portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L_Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch. <u>Computed quantity.</u> <del>(from Table I-1)</del>
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District's portion of Chapman Lake water within Doe Branch. Computed quantity.
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 8).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 6)
<i>Total CLW Available for</i>	C1-7a	Total amount of Chapman Lake water

FIELD	COLUMN #	DESCRIPTION
<i>Distribution from both WTPs (at WTP)</i>		available for distribution to Chapman Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 7).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to All "<u>Case TT</u>" Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to <u>RWTPa#</u> water customers. Sum of daily metered values for <u>RWTPa#</u> water customer meters, obtained from Table I-2 <u>TT</u> .
<i>Total <u>RWTP</u> Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied <u>from the RWTP to a#</u> Chapman Lake water customers. Sum of daily metered values from <u>RWTPa#</u> Chapman water customer meters, obtained from Table I-2 <u>TT</u> (does not include other water customers).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.



FIELD	COLUMN #	DESCRIPTION
<i>WTP)</i>		
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (e.g., Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLW and CLRW (at WTP)</i>	C1-11ab1	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP). (Col. [11a] + Col. [11b])
<i>Unutilized CLW and CLRW (at Lake)</i>	C1-11ab2	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to intake). (Col. [11ab1]/(1-col. [6c]))
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers: <a href="#">Tom Taylor</a></i>	C1-12 <u>TT</u>	Percentage of Chapman Lake water supplied to each <u>RWTP</u> Chapman Lake water customer. Computed quantity.
<i><a href="#">[TT] Mustang (Temple Dane) MeterID 22</a></i>	<u>C1-12a</u>	<u>Amount of treated water delivered to the Temple Dane Pump Station from the RWTP. Measured at District's MeterID 22 (from Table I-2, Col. 11).</u>
<i><a href="#">CLW in MeterID 22</a></i>	<u>C1-12a1</u>	<u>Percentage of Chapman Lake Water in Meter ID 22 supplied water. Computed</u>

FIELD	COLUMN #	DESCRIPTION
		<u>quantity.</u>
<u>[HP] Mustang (Temple Dane) MeterID 44</u>	<u>C1-12b</u>	<u>Amount of treated water delivered to the Temple Dane Pump Station from the Harpool WTP. Measured at District's MeterID 44 (from Table I-2, Col. 12).</u>
<u>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers; Temple Dane</u>	<u>C1-12 TD</u>	<u>Percentage of Chapman Lake water supplied to the Temple Dane Pump Station. Computed quantity.</u>
<u>Amount of Water Purchased by District from Dallas</u>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<u>Amount of Water Purchased by District from Denton</u>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<u>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</u>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake). Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<u>Chapman Lake Reuse Water used by District</u>	C1-15c	Amount of Chapman Lake Reuse Water used by District customers. Computed quantity.
<u>Available Chapman Lake Reuse Water (CLRW) (at WTP)</u>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<u>Potential CLRW Used by CL Customers</u>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] - [C1-10c]. Otherwise, equal to zero.
<u>CLRW Used by CL Customers</u>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.
<u>Total Raw Water Withdrawal minus CLRW</u>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.
<u>Potential New CLW Withdrawal in RWTP (only</u>	C1-19	Interim calculation. If [C1-18] is less than new CLW available <u>from the</u>

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>if less than <u>RWTP Customer CLW Demand</u></i>		<u>RWTP</u> , then equal to [C1-18]. Otherwise, equal to new CLW available ([C1-7a1]).
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.
<i><u>CLW + CLRW Available for Withdrawal by District (at intake)</u></i>	<u>C1-15b</u>	<u>Amount of total CLW and CLRW available for supply to water customers.</u>

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge from Customer (CWRF)</i>	C2-21	Portion of Chapman Lake water return flow in WWTP discharge attributed to this particular customer.

FIELD	COLUMN #	DESCRIPTION
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer (from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake. Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRF less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

FIELD	COLUMN #	DESCRIPTION
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRF)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.

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<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Direct/Indirect Reuse Losses</i>	C3-30	Amount of Chapman Lake water lost to direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

### Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.

### **Doe Branch Stream Distance Table**

This table provides an estimate of stream distance from the point where Chapman Lake water is discharged into Doe Branch (upstream of Lewisville Lake) to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses in Doe Branch. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

### **Stream Distance Lookup Table**

This table provides an estimate of stream distance from the point of discharge of each WWTP to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses from the discharge location to the lake. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

### **Lake Lewisville Elevation**

The~~This~~ table provides a daily calculation of Doe Branch Losses using the Lewisville Lake Water Surface Elevation and the Doe Branch Channel Length. The Doe Branch Channel Length is the length of Doe Branch between the point of Chapman water discharge and Lewisville Lake. These values were previously calculated on a monthly time-step ~~month~~ using only the elevation of the lake at the beginning of the month.

## Sarah Henderson

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**From:** Sarah Henderson  
**Sent:** Tuesday, February 28, 2023 9:49 AM  
**To:** Kathy Alexander  
**Cc:** Chris Kozlowski  
**Subject:** FW: Upper Trinity Regional Water District WRPERM No. 5778A

---

**From:** James Aldredge [REDACTED]  
**Sent:** Monday, February 27, 2023 8:52 PM  
**To:** Sarah Henderson <sarah.henderson@tceq.texas.gov>  
**Subject:** Re: Upper Trinity Regional Water District WRPERM No. 5778A

Good evening Sarah. I am so sorry for not responding earlier. Upper Trinity has identified an issue with the Accounting System that would most efficiently be addressed before issuance of the amendment. I need to talk to Kathy about how best to proceed. My plate is full tomorrow, but I'll reach out to her on Wednesday. Thanks for your patience.

James



### JAMES ALDREDGE

Principal  
512-322-5859 Direct  
512-656-5104  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
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On Feb 27, 2023, at 5:31 PM, Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)> wrote:

Hi James,  
Could you please provide a status update on your response?  
Thank you,



Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, February 2, 2023 11:02 AM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A

Hi Sarah. Ellen has been out of the office for a bit. We have a call scheduled tomorrow afternoon to discuss our response. I know you requested a response by 2/1. Is it okay if we can have until next Monday, 2/6? I think we may need to organize a call with Kathy to iron out the last couple of wrinkles. Thanks.



**JAMES ALDREDGE**

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**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Wednesday, January 18, 2023 11:10 AM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A

Mr. Aldredge,  
This acknowledges receipt, on December 2, 2022, of additional information and the applicants comments to the revised draft public notice and draft amendment for the referenced water use amendment application.

For your review, please find the attached revised, red-lined draft public notice and amendment incorporating the changes that staff has agreed to make.  
Any additional comments are requested by February 1, 2023.

Feel free to contact me with any questions.

Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

**From:** [Sarah Henderson](#)  
**To:** [REDACTED]  
**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A  
**Date:** Wednesday, January 18, 2023 11:09:00 AM  
**Attachments:** [UTRWD\\_5778A\\_Revised\\_Red\\_Line\\_Drafts\\_18Jan2023.pdf](#)

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Mr. Aldredge,

This acknowledges receipt, on December 2, 2022, of additional information and the applicants comments to the revised draft public notice and draft amendment for the referenced water use amendment application.

For your review, please find the attached revised, red-lined draft public notice and amendment incorporating the changes that staff has agreed to make.

Any additional comments are requested by February 1, 2023.

Feel free to contact me with any questions.

Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
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# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River and the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from -the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Lakeview WWTP, authorized by TPDES Permit

No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd.

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Regional Water Reclamation Facility (WRFP)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 631.06784 acre-feet per year (0.7563 mgd) of Lake Chapman-derived return flows; authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River; to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and



8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed ~~16,805+4.2838~~ acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills ~~Water Reclamation Facility~~ (WRF)).

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County, ZIP Code 75009; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County, ZIP Code 75068; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.13662 °N, Longitude 97.015886 °W in Denton County, ZIP Code 75065; and
4. Riverbend Regional WREP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County, ZIP Code 76227; and
- ~~54.~~ Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County, ZIP Code 76227; and
- ~~65.~~ City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249; and
- ~~76.~~ Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County, in ZIP Code 76266; and
- ~~87.~~ City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County, ZIP Code 76227; and
- ~~98.~~ Sandbrock WWTF~~P~~ will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County, ZIP Code 76227; and
- ~~109.~~ Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, -Longitude 96.828683 °W in Collin County, ZIP Code 75009.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22, and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018. The application was amended and additional information was received on May 25, ~~and~~ August 31, ~~2022~~ and December 2, 2022.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:

DRAFT



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, and Aubrey Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville) and the Elm Fork Trinity River, tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; [Lakeview WWTP](#).

authorized by TPDES Permit No. WQ0010698001 with a discharge of 7.500 mgd; Doe Branch (Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd; and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown Wastewater Treatment Facility (WWTF)); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend Regional Water Reclamation Facility (WRFP)); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 631.06784 acre-feet per year (0.7563 mgd) of Lake Chapman-derived return flows; authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and

7. Aubrey Branch and the Elm Fork Trinity River; to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and
8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805+4.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills ~~Water Reclamation Facility~~ (WRF)); and

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County; and
3. Lakeview Regional WRP will be discharged, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County; and
4. Riverbend Regional WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County; and
54. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County; and
65. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and
76. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County; and
87. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County; and



89. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County; and

109. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity River Water District Reuse of Chapman Lake Water—Accounting System Plan*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. Permittee is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River to convey not to exceed the following amounts of Lake Chapman-derived surface water-based return flows for municipal and industrial purposes in Permittee's service area:

1. 16,805 acre-feet per year discharged from the City of Celina's Downtown WWTF, authorized by TPDES Permit No. WQ0014246001, as amended.

~~2.~~ 22,406 acre-feet per year discharged from UTRWD's Doe Branch Regional WRP, authorized by TPDES Permit No. WQ0010698003, as amended.

~~2-3.~~ 8,402 acre-feet per year discharged from UTRWD's Lakeview Regional WRP, authorized by TPDES Permit No. WQ0010698001, as amended.

~~3-4.~~ 11,203 acre-feet per year discharged from UTRWD's Riverbend Regional WRP, authorized by TPDES Permit No. WQ0010698002, as amended.

~~4-5.~~ 5,153 acre-feet per year discharged from UTRWD's Peninsula Regional WRP, authorized by TPDES Permit No. WQ0014323001, as amended.

~~5-6.~~ ~~784631.06~~ acre-feet per year discharged from the City of Krum's WWTF, authorized by TPDES Permit No. WQ0010729001, as amended.

~~6-7.~~ 2,084 acre-feet per year discharged from the City of Sanger's WWTF, authorized by TPDES Permit No. WQ0014372001, as amended.

~~7-8.~~ 616 acre-feet per year discharged by the City of Aubrey's WWTF, authorized by TPDES Permit No. WQ0013647001.

~~8-9.~~ 16,814.2838 acre-feet per year discharged from the Mustang Special Utility District's Sandbrock WWTF, authorized by TPDES Permit No. WQ0015536001.

~~9-10.~~ 16,805 acre-feet per year discharged by the City of Celina Legacy Hills WRF by under TPDES Permit No. WQ0016068001.

- B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

## 2. DISCHARGE POINTS AND RATES

Lake Chapman-derived return flows under this amendment will be discharged at the following locations and rates in the Trinity River Basin:

A. Celina Downtown WWTF, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County.

B. Doe Branch Regional WRP, at a maximum 2-hour rate of 123.78 cfs (55,556 gpm), at a point on Doe Branch located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County.

B-C. Lakeview Regional WRP, at a maximum 2-hour rate of 32.18 cfs (14,444 gpm), at a point on the Elm Fork Trinity River (Lake Lewisville) located at Latitude 33.136623 °N, Longitude 97.015886 °W in Denton County.

~~E.D.~~ Riverbend Regional WRF, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville) located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County.

~~D.E.~~ Peninsula Regional WRF, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County.

~~E.F.~~ City of Krum WWTF, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County.

~~F.G.~~ Sanger WWTF, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County.

G. City of Aubrey WWTF, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County.

H. Sandbrock WWTF, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County.

I. Celina Legacy Hills WRF, at a maximum 2-hour rate of 92.83 cfs (41,667 gm), at a point on Little Elm Creek located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County.

### 3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

### 4. SPECIAL CONDITIONS

A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778.

B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.

C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan.

This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.

- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water—Accounting Plan System*) as subject to modification from time to time. Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the ~~permit~~ terms of this permit must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.
- F. Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, WQ0014372001, WQ0010698002, ~~and be granted TPDES Permit No. WQ0016068001~~. Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits or amendments are not granted.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

-----  
For the Commission

Date Issued:



**From:** [REDACTED]  
**To:** [Sarah Henderson](#)  
**Cc:** [Chris Kozlowski](#); [Kathy Alexander](#); [Brooke McGregor](#)  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A  
**Date:** Friday, December 2, 2022 4:43:01 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image823665.png](#)  
[image792977.png](#)  
[image190384.png](#)  
[UTRWD\\_5778A\\_Revised\\_Drafts\\_9Nov2022\\_Comments20221202.pdf](#)

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Hi Sarah. I got your voicemail. Try the attached version of the draft amendment. I think my metadata filter might have struck the changes in this pdf. If you still aren't seeing the strikethroughs and note attachments, let me know, and I'll try to reformat this.

Kathy, I also got your voicemail. I am out of pocket the rest of the day, but I'll call you back Monday morning. Y'all have a great weekend.

Thanks,  
James

### JAMES ALDREDGE

Principal

512-322-5859 Direct

512-656-5104

Lloyd Gosselink Rochelle & Townsend, P.C.

816 Congress Ave., Suite 1900, Austin, TX 78701

[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800



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**From:** James Aldredge

**Sent:** Friday, December 2, 2022 3:00 PM



**To:** 'Sarah Henderson' <sarah.henderson@tceq.texas.gov>  
**Cc:** Chris Kozlowski <chris.kozlowski@tceq.texas.gov>; Kathy Alexander - Texas Commission on Environmental Quality (Kathy.Alexander@tceq.texas.gov) <kathy.alexander@tceq.texas.gov>; Brooke McGregor <brooke.mcgregor@tceq.texas.gov>  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A

Good afternoon Sarah. Please see the attached comments on the revised draft amendment. I am also including the recently issued TPDES permit for the City of Celina. You will see a revision in the draft amendment that recognizes that this is now a currently issued permit rather than one to be issued.

I hope you all have a great weekend.

Thanks,  
James

---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Wednesday, November 30, 2022 11:06 AM  
**To:** James Aldredge <[REDACTED]>  
**Cc:** Chris Kozlowski <[chris.kozlowski@tceq.texas.gov](mailto:chris.kozlowski@tceq.texas.gov)>  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A

Good morning James,

Providing a response to the revised drafts by December 2<sup>nd</sup> is fine.

If you find that additional time will be needed for your review, please submit a formal request for an extension to respond.

Thank you,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

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**From:** James Aldredge <[REDACTED]>  
**Sent:** Tuesday, November 29, 2022 4:36 PM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A

Good afternoon Sarah. The Thanksgiving holiday came up on us faster than expected. So we are still working on comments on the revised draft. I anticipate being able to get those to you by the end of the week. Could we please have an informal and brief extension of our deadline

to provide comments till December 2?



**JAMES ALDREDGE**

Principal

[512-322-5859](tel:512-322-5859) Direct

[512-656-5104](tel:512-656-5104)

Lloyd Gosselink Rochelle & Townsend, P.C.

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**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>

**Sent:** Wednesday, November 9, 2022 4:43 PM

**To:** James Aldredge <>

**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A

Mr. Aldredge,

For your review, please find the attached, revised draft public notice, draft amendment and related technical memoranda for the referenced water use application.

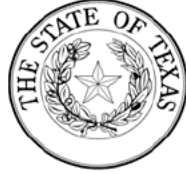
Comments are requested by November 23, 2022.

Thank you,

Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River and the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Doe Branch (Eastside) WWTP, authorized by

TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd.

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend WRP); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey 631.06 acre-feet per year (0.563 mgd) of Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River, to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and



8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills Water Reclamation Facility (WRF)).

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County, ZIP Code 75009; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County, ZIP Code 75068; and
3. Riverbend WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County, ZIP Code 76227; and
4. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County, ZIP Code 76227; and
5. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm) at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249; and
6. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County, in ZIP Code 76266; and
7. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County, ZIP Code 76227; and
8. Sandbrock WWTFP will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County, ZIP Code 76227; and
9. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County, ZIP Code 75009.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22, and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018. The application was amended and additional information was received on May 25 and August 31, 2022.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:

DRAFT

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, and Aubrey Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville) and the Elm Fork Trinity River, tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Doe Branch



(Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd; and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown Wastewater Treatment Facility (WWTF)); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend WRP); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey 631.06 acre-feet per year (0.563 mgd) of Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River, to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be

discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and

8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills Water Reclamation Facility (WRF)); and

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W Denton County; and
3. Riverbend WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County; and
4. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County; and
5. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm) at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and
6. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County; and
7. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County; and
8. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County; and
9. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity River Water District Reuse of Chapman Lake Water - Accounting Plan*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. Permittee is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River to convey not to exceed the following amounts of Lake Chapman-derived surface water-based return flows for municipal and industrial purposes in Permittee's service area:

1. 16,805 acre-feet per year discharged from the City of Celina's Downtown WWTF, authorized by TPDES Permit No. WQ0014246001, as amended.
2. 22,406 acre-feet per year from UTRWD's Doe Branch Regional WRP, authorized by TPDES Permit No. WQ0010698003, as amended.
3. 11,203 acre-feet per year discharged from UTRWD's Riverbend WRP, authorized by TPDES Permit No. WQ0010698002, as amended.
4. 5,153 acre-feet per year discharged from UTRWD's Peninsula Regional WRP, authorized by TPDES Permit No. WQ0014323001, as amended.
5. 631.06 acre-feet per year discharged from the City of Krum's WWTF, authorized by



TPDES Permit No. WQ0010729001, as amended.

6. 2,084 acre-feet per year discharged from the City of Sanger's WWTF, authorized by TPDES Permit No. WQ0014372001, as amended.
  7. 616 acre-feet per year discharged by the City of Aubrey's WWTF, authorized by TPDES Permit No. WQ0013647001.
  8. 16,814.2838 acre-feet per year discharged from the Mustang Special Utility District's Sandbrock WWTF, authorized by TPDES Permit No. WQ0015536001.
  9. 16,805 acre-feet per year discharged by the City of Celina Legacy Hills WRF under TPDES Permit No. WQ0016068001.
- B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.
2. DISCHARGE POINTS AND RATES

Lake Chapman-derived return flows under this amendment will be discharged at the following locations and rates in the Trinity River Basin:

- A. Celina Downtown WWTF, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County.
- B. Doe Branch Regional WRP, at a maximum 2-hour rate 123.78 cfs (55,556 gpm), at a point on Doe Branch located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County.
- C. Riverbend WRP, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville) located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County.
- D. Peninsula Regional WRP, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County.
- E. City of Krum WWTF, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County.
- F. Sanger WWTF, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County.
- G. City of Aubrey WWTF, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County.

- H. Sandbrock WWTF, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County.
- I. Celina Legacy Hills WRF, at a maximum 2-hour rate of 92.83 cfs (41,667 gm), at a point on Little Elm Creek located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County.

3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan. This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.
- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water - Accounting Plan*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the

applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.

- F. Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, WQ0014372001, WQ0010698002, and be granted TPDES Permit No. WQ0016068001. Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits or amendments are not granted.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

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For the Commission

Date Issued:


# Texas Commission on Environmental Quality

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## INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager      Date: June 14, 2022  
Water Rights Permitting Team

Through: Leslie Patterson, Team Leader  
Resource Protection Team


From:  Kenneth Coonrod, Aquatic Scientist  
Resource Protection Team

Subject: Upper Trinity Regional Water District  
WRPERM 5778A  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

### **ENVIRONMENTAL ANALYSIS ADDENDUM**

Resource Protection staff completed its environmental analysis memorandum on September 20, 2021, and a draft amendment was provided to the Applicant on January 6, 2022 and a revised draft amendment was provided to the Applicant on March 8, 2022. On May 25, 2022, the Upper Trinity Regional Water District (UTRWD) provided an amended application.

Resource Protection staff has reviewed the amended application provided by UTRWD and determined that it does not affect the analyses and recommendations in the September 20, 2021 environmental analysis memorandum. Resource Protection staff has no further recommendations for the proposed amendment.

  
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Kenneth Coonrod, Aquatic Scientist

# Texas Commission on Environmental Quality


## INTEROFFICE MEMORANDUM

**To:** Sarah Henderson, Project Manager  
Water Rights Permitting Team

**Date:** June 14, 2022

**Through:** Leslie Patterson, Team Leader  
Resource Protection Team

  
Kristin Wang, Senior Water Conservation Specialist  
Resource Protection Team



**From:** Jennifer Allis, Senior Water Conservation Specialist  
Resource Protection Team

**Subject:** Upper Trinity Regional Water District  
WRPERM 5778A  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

### WATER CONSERVATION ADDENDUM

Resource Protection staff completed its water conservation review memorandum on September 20, 2021. A draft amendment was provided to the Applicant on January 6, 2022 and a revised draft amendment was provided to the Applicant on March 8, 2022. On May 25, 2022, the Upper Trinity Regional Water District (UTRWD) provided an amended application.

Resource Protection staff has reviewed the amended application provided by UTRWD and determined that it does not affect the analyses and recommendations in the September 20, 2021 water conservation memorandum. Resource Protection staff has no further recommendations for the proposed amendment.



Jennifer Allis, Senior Water Conservation Specialist





Wastewater Treatment Plant	Discharge Volume in the Permit or Original Application	Discharge Volume in the Amended Application
Celina Downtown WWTF	0.95 MGD	15.0 MGD
Sanger WWTF	0.98 MGD	1.86 MGD
Aubrey WWTF	0	0.55 MGD
Celina Legacy Hills WRF	0	15.0 MGD

Staff reviewed current discharge information from Doe Branch WRP, Peninsula WRP, Riverbend WRP, Celina Downtown WWTF, and Sanger WWTF and determined that the current discharges were less than the amounts currently authorized for reuse under Water Use Permit 5778. In evaluating whether UTRWD's requested amendment to the permit would affect senior water rights, staff notes that no water rights can be affected because no water rights have been granted based on the additional discharges.

UTRWD submitted a revised accounting plan (Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables) that accounts for the return flows requested in the amended application. Staff reviewed the accounting plan and found it to be acceptable.

Staff recommends that the amended application be granted, that staff's previous recommendations be retained in the revised amendment, except for Paragraph 4.E. which should be revised as described below, and that the revised amendment include an additional special condition.

In lieu of Paragraph 4.E.

Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.

#### Additional Special Condition

Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, WQ0014372001, WQ0010698002, and be granted TPDES Permit Nos. WQ0016068001. Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits are not granted.

*Andrew Garcia*

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Andrew Garcia, Hydrologist



TPDES PERMIT NO. WQ0016068001  
[For TCEQ office use only - EPA I.D.  
No. TX0142018]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

City of Celina

whose mailing address is

142 North Ohio Street  
Celina, Texas 75009

is authorized to treat and discharge wastes from the Legacy Hills Water Reclamation Facility,  
SIC Code 4952

located approximately 1,650 feet southeast of the intersection of County Line Road and West  
Farm-to-Market Road 455, in Collin County, Texas 75009

via pipe to an unnamed tributary, thence to Little Elm Creek, thence to Lewisville Lake in  
Segment No. 0823 of the Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth  
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),  
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does  
not grant to the permittee the right to use private or public property for conveyance of  
wastewater along the discharge route described in this permit. This includes, but is not limited  
to, property belonging to any individual, partnership, corporation, or other entity. Neither does  
this permit authorize any invasion of personal rights nor any violation of federal, state, or local  
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be  
necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE: October 13, 2022

A handwritten signature in black ink, appearing to read "T. G. Balu", written over a horizontal line.

For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 2.0 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.950 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 2,778 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (79)	15	25	35	One/week	Composite
Total Suspended Solids	10 (79)	15	25	35	One/week	Composite
Ammonia Nitrogen	2 (16)	5	10	15	One/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored once per week by grab sample.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 2.0 million gallons per day (MGD) facility and lasting through the completion of expansion to the 5.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 2.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 5,556 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (84)	10	20	30	Two/week	Composite
Total Suspended Solids	10 (167)	15	25	33	Two/week	Composite
Ammonia Nitrogen	2 (33)	5	10	15	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 5.0 million gallons per day (MGD) facility and lasting through the completion of expansion to the 15.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 5.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 13,889 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (209)	10	20	30	Five/week	Composite
Total Suspended Solids	10 (417)	15	25	33	Five/week	Composite
Ammonia Nitrogen	1.8 (75)	5	10	15	Five/week	Composite
Total Phosphorus	0.5 (21)	1	2	3	Five/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored five times per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 15.0 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 15.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 41,667 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (626)	10	20	30	One/day	Composite
Total Suspended Solids	10 (1,252)	15	25	33	One/day	Composite
Ammonia Nitrogen	1.2 (150)	5	10	15	One/day	Composite
Total Phosphorus	0.5 (63)	1	2	3	One/day	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per day by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored once per day by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

## DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

### 1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

### 2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.



- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Compliance Monitoring Team of the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224).

## 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Compliance Monitoring Team of the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

#### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application, or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.



- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

#### 5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

#### 6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

#### 7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

#### 8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

#### 9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

#### 10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

#### 11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
  - iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee;
  - ii. the permit number(s);
  - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iv. the date of filing of the petition.

#### **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).
7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be

- reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.
- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
  - c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
  10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
  11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
    - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
    - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
    - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

- d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
- e. The term “industrial solid waste management unit” means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
  - i. Volume of waste and date(s) generated from treatment process;
  - ii. Volume of waste disposed of on-site or shipped off-site;
  - iii. Date(s) of disposal;
  - iv. Identity of hauler or transporter;
  - v. Location of disposal site; and
  - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

#### B. Testing Requirements

1. Sewage sludge or biosolids shall be tested once per term of the permit for the Interim I phase and annually for the Interim II, III, and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

- a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent-solids in the sewage sludge greater than 50%; or

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B biosolids criteria.



Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.
  - ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.
4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Biosolids shall be injected below the surface of the land.
  - ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test PCBs	- once per term of the permit for the Interim I phase and annually for the Interim II, III, and Final phases - once per term of the permit for the Interim I phase and annually for the Interim II, III, and Final phases
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All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE OR BIOSOLIDS FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

### **C. Management Practices**

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

### **D. Notification Requirements**

1. If bulk is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk biosolids will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

### **E. Record Keeping Requirements**

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a

period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
  - c. The number of acres in each site on which bulk biosolids are applied.
  - d. The date and time biosolids are applied to each site.
  - e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
  - f. The total amount of biosolids applied to each site in dry tons.



The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **F. Reporting Requirements**

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk biosolids are applied.
  - c. The date and time bulk biosolids are applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
  - e. The amount of biosolids (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested once per term of the permit for the Interim I phase and annually for the Interim II, III, and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped, and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record Keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

##### **A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

##### **B. Record Keeping Requirements**

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge or biosolids transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

### **C. Reporting Requirements**

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

## OTHER REQUIREMENTS

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category C (Interim I phase), Category B (Interim II and Interim III phases), and Category A (Final phase) facility must be operated by a chief operator or an operator holding a Class C license or higher in the Interim I [0.95 MGD] phase, Class B license or higher in the Interim II [2 MGD] and Interim III [5 MGD] phases, and Class A license or higher in the Final [15 MGD] phase. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. There is no mixing zone established for this discharge to an intermittent stream with perennial pools. Chronic toxic criteria apply at the point of discharge.
4. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e) for all phases (Interim I, II, III, and Final phases). (See Attachment A.)
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, daily may be reduced to 5/week in all phases. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.

7. Prior to construction of the treatment facilities for each phase (Interim I [0.95 MGD], II [2.0 MGD], III [5.0 MGD], and Final [15.0 MGD] phases) the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications, and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the effluent limitations required on Page nos. 2, 2a, 2b, and 2c of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.
8. Within 120 days from the start-up of the facility, the permittee shall complete Attachment B with the analytical results for Outfall 001. The completed tables with the results of these analysis and laboratory reports shall be submitted to the Municipal Permits Team, Wastewater Permitting Section MC 148, TCEQ Water Quality Division. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations and/or monitoring requirements. Test methods utilized to complete the tables shall be according to the test procedures specified in the Definitions and Standard Permit Conditions section of this permit and sensitive enough to detect the parameters listed in Attachment B at the minimum analytical level (MAL).
9. Reporting requirements according to 30 TAC §§ 319.1-319.11 and any additional effluent reporting requirements contained in this permit are suspended from the effective date of the permit until plant startup or discharge from the facility described by this permit, whichever occurs first. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five days prior to plant startup or anticipated discharge, whichever occurs first, and prior to completion of each additional phase on Notification of Completion Form 20007.



**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007

## BIOMONITORING REQUIREMENTS

### CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

#### 1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. Within 90 days of the initiation of the Interim II (2.0 MGD) phase, the permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
  - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. Testing Frequency Reduction

- 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.
- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:

- 1) a control mean survival of 80% or greater;
- 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
- 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
- 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
- 5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;
- 6) a percent minimum significant difference of 47 or less for water flea reproduction; and
- 7) a percent minimum significant difference of 30 or less for fathead minnow growth.

b. Statistical Interpretation

- 1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be the Fisher's exact test as described in the manual referenced in in Part 1.b.

- 2) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.
- 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 4) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
- 5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control (0% effluent).
- 6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3.
- 7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 3 will be used when making a determination of test acceptability.
- 8) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

- 1) Dilution water used in the toxicity tests must be the receiving water collected at a point upstream of the discharge point as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are

conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:

- a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or
  - b) use the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
- a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
  - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days); and
  - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.
- d. Samples and Composites
- 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
  - 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are

waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

- 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
  - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
  - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
  - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the water flea, Parameter TOP3B, report the NOEC for survival.
  - 3) For the water flea, Parameter TXP3B, report the LOEC for survival.
  - 4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."
  - 5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.

- 6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.
  - 7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.
  - 9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.
  - 10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
  - 11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.
  - 12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

#### 4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. Significant lethality and significant effect were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates

significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.

- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
  - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to



- perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
- 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation which identifies the pollutant(s) and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly

testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.
- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times      No. 1 FROM: \_\_\_\_\_ Date    Time      TO: \_\_\_\_\_ Date    Time  
 Composites Collected No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
 No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water      \_\_\_\_\_ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

\*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)  
 Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) LOEC survival = \_\_\_\_\_ % effluent

c.) NOEC reproduction = \_\_\_\_\_ % effluent

d.) LOEC reproduction = \_\_\_\_\_ % effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date Time \_\_\_\_\_ TO: \_\_\_\_\_ Date Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

\* Coefficient of Variation = standard deviation x 100/mean

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

TABLE 1 (SHEET 4 OF 4)  
 BIOMONITORING REPORTING  
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST  
 FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

\* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) LOEC survival = \_\_\_\_\_ % effluent

c.) NOEC growth = \_\_\_\_\_ % effluent

d.) LOEC growth = \_\_\_\_\_ % effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. Within 90 days of the initiation of the Interim II (2.0 MGD) phase, the toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:
  - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
  - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, and then repeat, an invalid test during the same reporting period. The repeat test shall include the control and the 100% effluent dilution and use the appropriate number of organisms and replicates, as specified above. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests

utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in item b.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
  - 1) The permittee shall collect one composite sample from Outfall 001.
  - 2) The permittee shall collect the composite sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The sample shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
  - 5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.



- 1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
  - 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, and October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
- 1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”
  - 2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”
  - 2) For retest number 2, Parameter 22416, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”

#### 4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining

consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
- 1) **Specific Activities** - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) **Sampling Plan** - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) **Quality Assurance Plan** - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) **Project Organization** - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
  - 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for

a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in Part 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism. A copy of the TRE final report shall also be submitted to the U.S. EPA Region 6 office.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent

TABLE 2 (SHEET 2 OF 2)  
 FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent

Attachment A - Buffer Zone Maps  
 TPDES Permit No. WQ00160068001

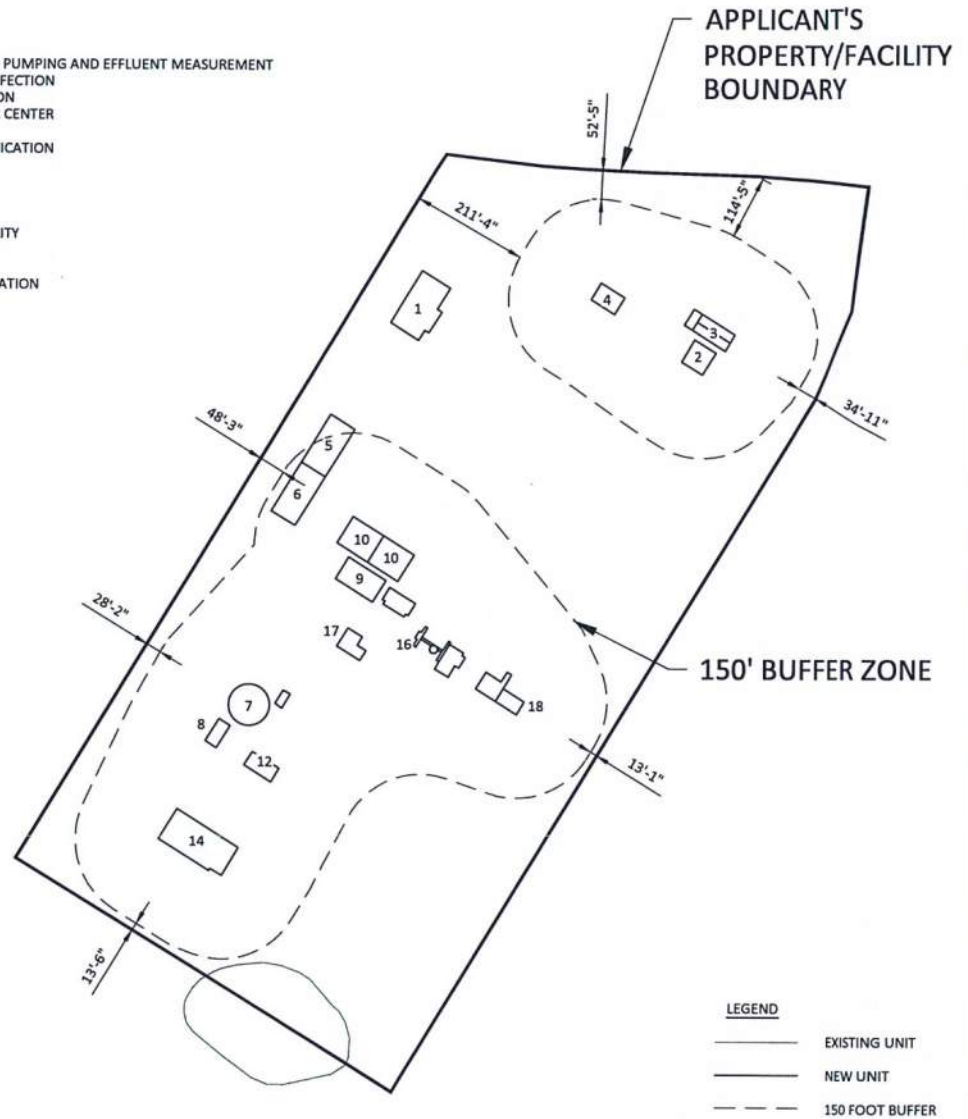


PLUMMER



STRUCTURE LEGEND

- 1 ADMIN
- 2 RECLAIMED WATER PUMPING AND EFFLUENT MEASUREMENT
- 3 ULTRAVIOLET DISINFECTION
- 4 TERTIARY FILTRATION
- 5 ELECTRICAL POWER CENTER
- 6 STANDBY POWER
- 7 SECONDARY CLARIFICATION
- 8 RAS/WAS
- 9 BLOWERS
- 10 AERATION BASIN
- 12 SOLIDS HOLDING
- 14 DEWATERING FACILITY
- 16 HEADWORKS
- 17 ODOR CONTROL
- 18 INFLUENT PUMP STATION



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ATTACHMENT E.1  
 CITY OF CELINA  
 LEGACY HILLS WATER RECLAMATION FACILITY  
 NEW TPDES PERMIT APPLICATION  
 BUFFER ZONE MAP - INTERIM I PHASE

Attachment A - Buffer Zone Maps  
 TPDES Permit No. WQ00160068001

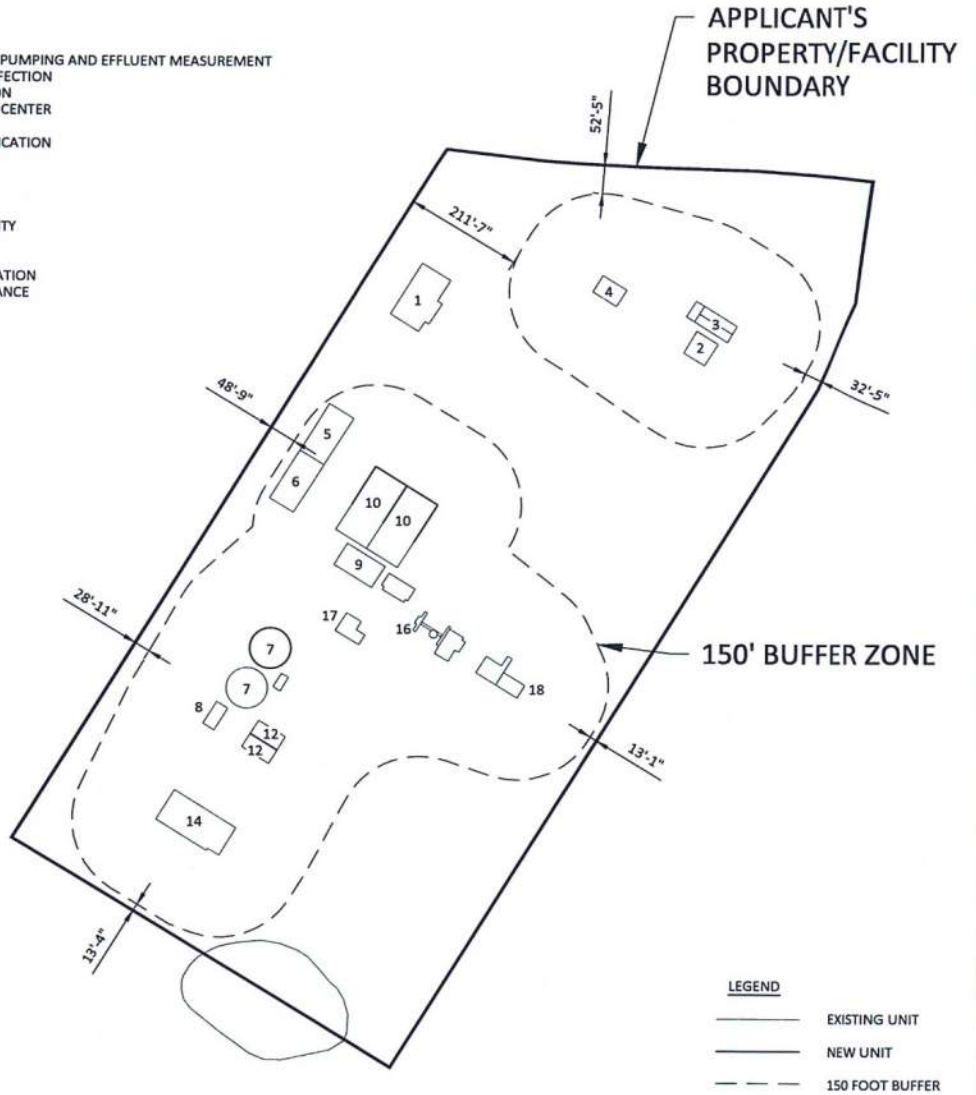


PLUMMER



**STRUCTURE LEGEND**

- 1 ADMIN
- 2 RECLAIMED WATER PUMPING AND EFFLUENT MEASUREMENT
- 3 ULTRAVIOLET DISINFECTION
- 4 TERTIARY FILTRATION
- 5 ELECTRICAL POWER CENTER
- 6 STANDBY POWER
- 7 SECONDARY CLARIFICATION
- 8 RAS/WAS
- 9 BLOWERS
- 10 AERATION BASIN
- 12 SOLIDS HOLDING
- 14 DEWATERING FACILITY
- 16 HEADWORKS
- 17 ODOR CONTROL
- 18 INFLUENT PUMP STATION
- 19 OPS AND MAINTENANCE



**LEGEND**

- EXISTING UNIT
- NEW UNIT
- - - 150 FOOT BUFFER

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ATTACHMENT E.2  
 CITY OF CELINA  
 LEGACY HILLS WATER RECLAMATION FACILITY  
 NEW TPDES PERMIT APPLICATION  
 BUFFER ZONE MAP - INTERIM II PHASE



Attachment A - Buffer Zone Maps  
 TPDES Permit No. WQ00160068001



PLUMMER

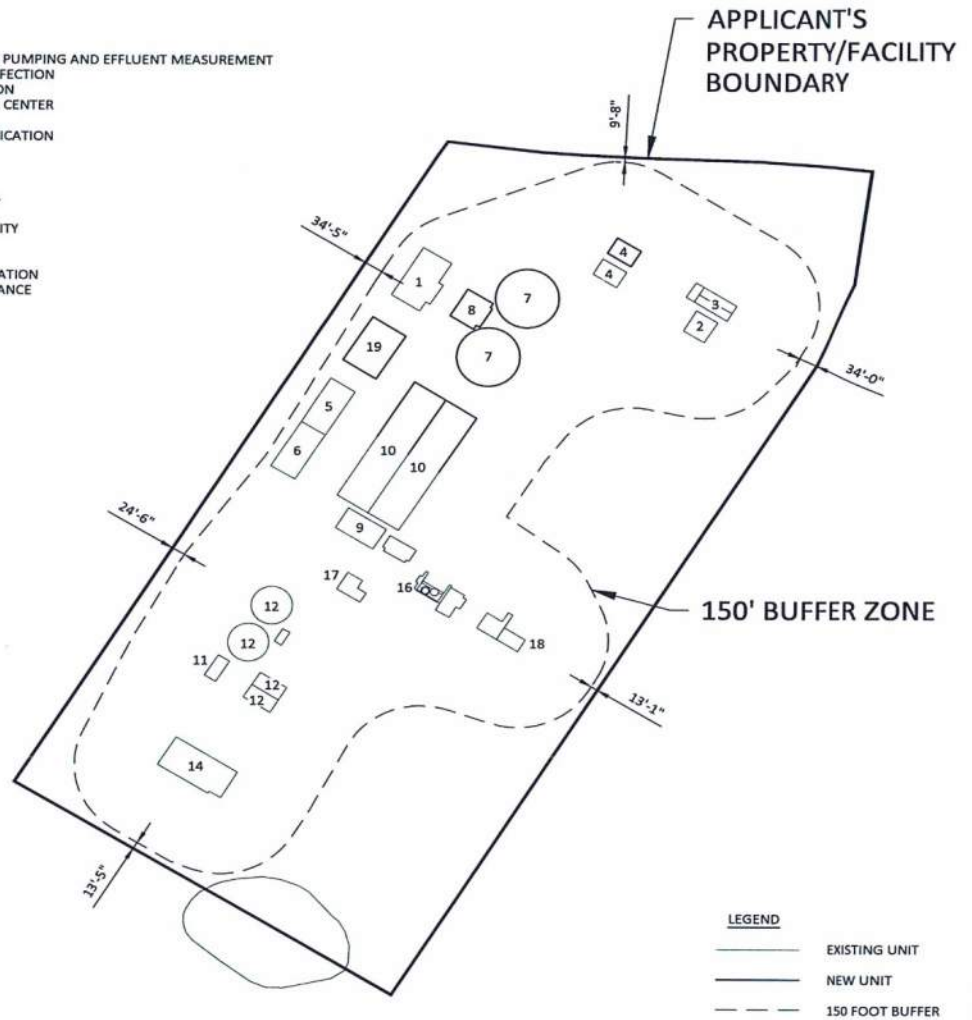


GARVER



**STRUCTURE LEGEND**

- 1 ADMIN
- 2 RECLAIMED WATER PUMPING AND EFFLUENT MEASUREMENT
- 3 ULTRAVIOLET DISINFECTION
- 4 TERTIARY FILTRATION
- 5 ELECTRICAL POWER CENTER
- 6 STANDBY POWER
- 7 SECONDARY CLARIFICATION
- 8 RAS/WAS
- 9 BLOWERS
- 10 AERATION BASIN
- 11 SLUDGE PUMPING
- 12 SOLIDS HOLDING
- 14 DEWATERING FACILITY
- 16 HEADWORKS
- 17 ODOR CONTROL
- 18 INFLUENT PUMP STATION
- 19 OPS AND MAINTENANCE



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ATTACHMENT E.3  
 CITY OF CELINA  
 LEGACY HILLS WATER RECLAMATION FACILITY  
 NEW TPDES PERMIT APPLICATION  
 BUFFER ZONE MAP - INTERIM III PHASE

Attachment A - Buffer Zone Maps  
 TPDES Permit No. WQ00160068001

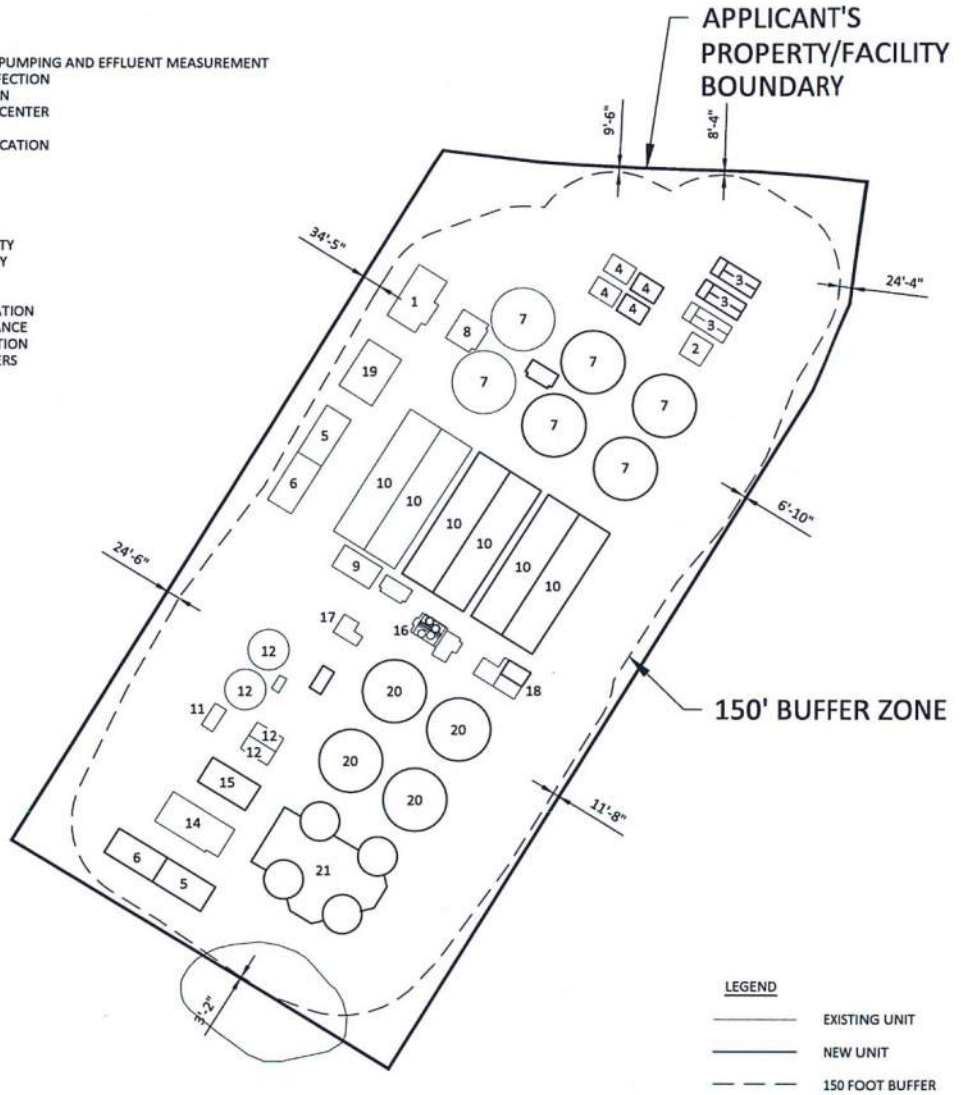


PLUMMER



**STRUCTURE LEGEND**

- 1 ADMIN
- 2 RECLAIMED WATER PUMPING AND EFFLUENT MEASUREMENT
- 3 ULTRAVIOLET DISINFECTION
- 4 TERTIARY FILTRATION
- 5 ELECTRICAL POWER CENTER
- 6 STANDBY POWER
- 7 SECONDARY CLARIFICATION
- 8 RAS/WAS
- 9 BLOWERS
- 10 AERATION BASIN
- 11 SLUDGE PUMPING
- 12 SOLIDS HOLDING
- 14 DEWATERING FACILITY
- 15 THICKENING FACILITY
- 16 HEADWORKS
- 17 ODOR CONTROL
- 18 INFLUENT PUMP STATION
- 19 OPS AND MAINTENANCE
- 20 PRIMARY CLARIFICATION
- 21 ANAEROBIC DIGESTERS



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ATTACHMENT E.4  
 CITY OF CELINA  
 LEGACY HILLS WATER RECLAMATION FACILITY  
 NEW TPDES PERMIT APPLICATION  
 BUFFER ZONE MAP - FINAL PHASE

**Attachment B**  
**WQ00116068001**  
**City of Celina**

**DOMESTIC TECHNICAL REPORT 1.0**

**POLLUTANT ANALYSES REQUIREMENTS**

**Section 7. Pollutant Analysis of Treated Effluent**

For pollutants identified in Table 1.0(2), indicate type of sample of Grab or Composite.

Date and time sample(s) collected:

***Table 1.0(2) – Pollutant Analysis for Wastewater Treatment Facilities***

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>Sample Type</b>	<b>MAL (µg/l)</b>
CBOD <sub>5</sub> , mg/l					50
Total Suspended Solids (TSS), mg/l					0.01
Ammonia Nitrogen (NH <sub>3</sub> -N), mg/l					2.5
Nitrate Nitrogen, mg/l					10
Total Kjeldahl Nitrogen (TKN), mg/l					5
Sulfate, mg/l					0.5
Chloride, mg/l					3
Total Phosphorus, mg/l					10
pH, standard units (SU)					50
Dissolved Oxygen (DO), mg/l					5
Chlorine Residual, mg/l					5
<i>E.coli</i> (CFU or MPN/100 ml)					10
Total Dissolved Solids, mg/l					10
Oil & Grease, mg/l					10
Alkalinity (CaCO <sub>3</sub> ), mg/l					10

**Attachment B**  
**WQ00116068001**  
**City of Celina**

**DOMESTIC WORKSHEET 4.0**

**POLLUTANT ANALYSES REQUIREMENTS\***

**Section 1. Toxic Pollutants**

For pollutants identified in Table 4.0(1), indicate type of sample.

Grab  Composite

Date and time sample(s) collected:

**Table 4.0(1) – Toxics Analysis**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Acrylonitrile				50
Aldrin				0.01
Aluminum				2.5
Anthracene				10
Antimony				5
Arsenic				0.5
Barium				3
Benzene				10
Benzidine				50
Benzo(a)anthracene				5
Benzo(a)pyrene				5
Bis(2-chloroethyl)ether				10
Bis(2-ethylhexyl)phthalate				10
Bromodichloromethane				10
Bromoform				10
Cadmium				1
Carbon Tetrachloride				2
Carbaryl				5
Chlordane				0.2

**Attachment B**  
**WQ00116068001**  
**City of Celina**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Chlorobenzene				10
Chlorodibromomethane				10
Chloroform				10
Chlorpyrifos				0.05
Chromium (Total)				3
Chromium (Tri) (*1)				N/A
Chromium (Hex)				3
Copper				2
Chrysene				5
p-Chloro-m-Cresol				10
4,6-Dinitro-o-Cresol				50
p-Cresol				10
Cyanide (*2)				10
4,4'- DDD				0.1
4,4'- DDE				0.1
4,4'- DDT				0.02
2,4-D				0.7
Demeton (O and S)				0.20
Diazinon				0.5/0.1
1,2-Dibromoethane				10
m-Dichlorobenzene				10
o-Dichlorobenzene				10
p-Dichlorobenzene				10
3,3'-Dichlorobenzidine				5
1,2-Dichloroethane				10

**Attachment B**  
**WQ00116068001**  
**City of Celina**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
1,1-Dichloroethylene				10
Dichloromethane				20
1,2-Dichloropropane				10
1,3-Dichloropropene				10
Dicofol				1
Dieldrin				0.02
2,4-Dimethylphenol				10
Di-n-Butyl Phthalate				10
Diuron				0.09
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Ethylbenzene				10
Fluoride				500
Guthion				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclohexane (alpha)				0.05
Hexachlorocyclohexane (beta)				0.05
gamma-Hexachlorocyclohexane (Lindane)				0.05
Hexachlorocyclopentadiene				10

**Attachment B**  
**WQ00116068001**  
**City of Celina**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Hexachloroethane				20
Hexachlorophene				10
Lead				0.5
Malathion				0.1
Mercury				0.005
Methoxychlor				2
Methyl Ethyl Ketone				50
Mirex				0.02
Nickel				2
Nitrate-Nitrogen				100
Nitrobenzene				10
N-Nitrosodiethylamine				20
N-Nitroso-di-n-Butylamine				20
Nonylphenol				333
Parathion (ethyl)				0.1
Pentachlorobenzene				20
Pentachlorophenol				5
Phenanthrene				10
Polychlorinated Biphenyls (PCB's) (*3)				0.2
Pyridine				20
Selenium				5
Silver				0.5
1,2,4,5-Tetrachlorobenzene				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10

**Attachment B  
WQ00116068001  
City of Celina**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Thallium				0.5
Toluene				10
Toxaphene				0.3
2,4,5-TP (Silvex)				0.3
Tributyltin (see instructions for explanation)				0.01
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
2,4,5-Trichlorophenol				50
TTHM (Total Trihalomethanes)				10
Vinyl Chloride				10
Zinc				5

**(\*1) Determined by subtracting hexavalent Cr from total Cr.**

**(\*2) Cyanide, amenable to chlorination or weak-acid dissociable.**

**(\*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.**



**Attachment B**  
**WQ00116068001**  
**City of Celina**

**Section 2. Priority Pollutants**

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab  Composite

Date and time sample(s) collected:

**Table 4.0(2)A – Metals, Cyanide, Phenols**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony				5
Arsenic				0.5
Beryllium				0.5
Cadmium				1
Chromium (Total)				3
Chromium (Hex)				3
Chromium (Tri) (*1)				N/A
Copper				2
Lead				0.5
Mercury				0.005
Nickel				2
Selenium				5
Silver				0.5
Thallium				0.5
Zinc				5
Cyanide (*2)				10
Phenols, Total				10

(\*1) Determined by subtracting hexavalent Cr from total Cr.

(\*2) Cyanide, amenable to chlorination or weak-acid dissociable

**Attachment B**  
**WQ00116068001**  
**City of Celina**

**Table 4.0(2)B – Volatile Compounds**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Acrolein				50
Acrylonitrile				50
Benzene				10
Bromoform				10
Carbon Tetrachloride				2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroethane				50
2-Chloroethylvinyl Ether				10
Chloroform				10
Dichlorobromomethane [Bromodichloromethane]				10
1,1-Dichloroethane				10
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
1,2-Dichloropropane				10
1,3-Dichloropropylene [1,3-Dichloropropene]				10
1,2-Trans-Dichloroethylene				10
Ethylbenzene				10
Methyl Bromide				50
Methyl Chloride				50
Methylene Chloride				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10
Toluene				10
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
Vinyl Chloride				10

**Attachment B**  
**WQ00116068001**  
**City of Celina**

**Table 4.0(2)C – Acid Compounds**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
2-Chlorophenol				10
2,4-Dichlorophenol				10
2,4-Dimethylphenol				10
4,6-Dinitro-o-Cresol				50
2,4-Dinitrophenol				50
2-Nitrophenol				20
4-Nitrophenol				50
P-Chloro-m-Cresol				10
Pentalchlorophenol				5
Phenol				10
2,4,6-Trichlorophenol				10

**Attachment B**  
**WQ00116068001**  
**City of Celina**

**Table 4.o(2)D – Base/Neutral Compounds**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene				10
Acenaphthylene				10
Anthracene				10
Benzidine				50
Benzo(a)Anthracene				5
Benzo(a)Pyrene				5
3,4-Benzofluoranthene				10
Benzo(ghi)Perylene				20
Benzo(k)Fluoranthene				5
Bis(2-Chloroethoxy)Methane				10
Bis(2-Chloroethyl)Ether				10
Bis(2-Chloroisopropyl)Ether				10
Bis(2-Ethylhexyl)Phthalate				10
4-Bromophenyl Phenyl Ether				10
Butyl benzyl Phthalate				10
2-Chloronaphthalene				10
4-Chlorophenyl phenyl ether				10
Chrysene				5
Dibenzo(a,h)Anthracene				5
1,2-(o)Dichlorobenzene				10
1,3-(m)Dichlorobenzene				10
1,4-(p)Dichlorobenzene				10
3,3-Dichlorobenzidine				5
Diethyl Phthalate				10
Dimethyl Phthalate				10
Di-n-Butyl Phthalate				10
2,4-Dinitrotoluene				10
2,6-Dinitrotoluene				10
Di-n-Octyl Phthalate				10
1,2-Diphenylhydrazine (as Azo-benzene)				20
Fluoranthene				10
Fluorene				10
Hexachlorobenzene				5
Hexachlorobutadiene				10

**Attachment B**  
**WQ00116068001**  
**City of Celina**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Hexachlorocyclo-pentadiene				10
Hexachloroethane				20
Indeno(1,2,3-cd)pyrene				5
Isophorone				10
Naphthalene				10
Nitrobenzene				10
N-Nitrosodimethylamine				50
N-Nitrosodi-n-Propylamine				20
N-Nitrosodiphenylamine				20
Phenanthrene				10
Pyrene				10
1,2,4-Trichlorobenzene				10

**Attachment B**  
**WQ00116068001**  
**City of Celina**

**Table 4.0(2)E - Pesticides**

<b>Pollutant</b>	<b>AVG Effluent Conc. (µg/l)</b>	<b>MAX Effluent Conc. (µg/l)</b>	<b>Number of Samples</b>	<b>MAL (µg/l)</b>
Aldrin				0.01
alpha-BHC (Hexachlorocyclohexane)				0.05
beta-BHC (Hexachlorocyclohexane)				0.05
gamma-BHC (Hexachlorocyclohexane)				0.05
delta-BHC (Hexachlorocyclohexane)				0.05
Chlordane				0.2
4,4-DDT				0.02
4,4-DDE				0.1
4,4,-DDD				0.1
Dieldrin				0.02
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Endrin Aldehyde				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
PCB-1242				0.2
PCB-1254				0.2
PCB-1221				0.2
PCB-1232				0.2
PCB-1248				0.2
PCB-1260				0.2
PCB-1016				0.2
Toxaphene				0.3

**Section 3. Dioxin/Furan Compounds**

---

**A.** Are any of the following compounds used by a contributing industrial user or significant industrial user that is part of the collection system for the facility that you have reason to believe are present in the influent to the wastewater treatment plant?

Yes  No

If **yes**, identify which compound(s) are potentially sent to the facility.

- 2,4,5-trichlorophenoxy acetic acid  
Common Name 2,4,5-T, CASRN 93-76-5
- 2-(2,4,5-trichlorophenoxy) propanoic acid  
Common Name Silvex or 2,4,5-TP, CASRN 93-72-1
- 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate  
Common Name Erbon, CASRN 136-25-4
- 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate  
Common Name Ronnel, CASRN 299-84-3
- 2,4,5-trichlorophenol  
Common Name TCP, CASRN 95-95-4
- hexachlorophene  
Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

**B.** Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

Yes  No

If **yes**, provide a brief description of the conditions for its presence.

If you responded **yes** to either Subsection A **or** B, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate type of sample.

Grab  Composite

Date and time sample(s) collected:

**Attachment B**  
**WQ00116068001**  
**City of Celina**

**TABLE 4.o(2)F - DIOXIN/FURAN COMPOUNDS**

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8 PeCDD	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8 HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

\*For PCBs, if all are non-detects, enter the highest non-detect preceded by a "<".



**From:** [Sarah Henderson](#)  
**To:** [REDACTED]  
**Cc:** [Chris Kozlowski](#)  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A  
**Date:** Wednesday, November 30, 2022 11:05:00 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)

---

Good morning James,

Providing a response to the revised drafts by December 2<sup>nd</sup> is fine.

If you find that additional time will be needed for your review, please submit a formal request for an extension to respond.

Thank you,

Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Tuesday, November 29, 2022 4:36 PM  
**To:** Sarah Henderson <sarah.henderson@tceq.texas.gov>  
**Subject:** RE: Upper Trinity Regional Water District WRPERM No. 5778A

Good afternoon Sarah. The Thanksgiving holiday came up on us faster than expected. So we are still working on comments on the revised draft. I anticipate being able to get those to you by the end of the week. Could we please have an informal and brief extension of our deadline to provide comments till December 2?

**JAMES ALDREDGE**

Principal  
[512-322-5859](tel:512-322-5859) Direct  
[512-656-5104](tel:512-656-5104)



Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800

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**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>

**Sent:** Wednesday, November 9, 2022 4:43 PM

**To:** James Aldredge <[REDACTED]>

**Subject:** Upper Trinity Regional Water District WRPERM No. 5778A

Mr. Aldredge,

For your review, please find the attached, revised draft public notice, draft amendment and related technical memoranda for the referenced water use application.

Comments are requested by November 23, 2022.

Thank you,

Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River and the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Doe Branch (Eastside) WWTP, authorized by

TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd.

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown WWTF); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend WRP); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey 631.06 acre-feet per year (0.563 mgd) of Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River, to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and

8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills Water Reclamation Facility (WRF)).

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County, ZIP Code 75009; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County, ZIP Code 75068; and
3. Riverbend WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County, ZIP Code 76227; and
4. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County, ZIP Code 76227; and
5. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm) at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249; and
6. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County, in ZIP Code 76266; and
7. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County, ZIP Code 76227; and
8. Sandbrock WWTFP will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County, ZIP Code 76227; and
9. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County, ZIP Code 75009.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area.



UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22, and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018. The application was amended and additional information was received on May 25 and August 31, 2022.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:

DRAFT

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, and Aubrey Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville) and the Elm Fork Trinity River, tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including Celina Downtown WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0014246001 with a discharge of 0.950 mgd; Doe Branch



(Eastside) WWTP, authorized by TPDES Permit No. WQ0010698003 with a discharge of 5.225 mgd; Riverbend WWTP, authorized by TPDES Permit No. WQ0010698002 with a discharge of 5.700 mgd; Peninsula WWTP, authorized by TPDES Permit No. WQ0014323001 with a discharge of 2.000 mgd; the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001 with a discharge of 0.137 mgd; and Sanger WWTP, authorized by TPDES Permit No. WQ0014372001 with a discharge of 0.980 mgd; and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of:

1. An unnamed tributary of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0014246001, as amended (Celina Downtown Wastewater Treatment Facility (WWTF)); and
2. Doe Branch and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 22,406 acre-feet per year (20.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698003, as amended (Doe Branch Regional Water Reclamation Plant (WRP)); and
3. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 11,203 acre-feet per year (10.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0010698002, as amended (Riverbend WRP); and
4. Cantrell Slough and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 5,153 acre-feet per year (4.6 mgd) of Lake Chapman-derived return flows authorized to be discharged by UTRWD under TPDES Permit No. WQ0014323001, as amended (Peninsula Regional WRP); and
5. North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey 631.06 acre-feet per year (0.563 mgd) of Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTF); and
6. Ranger Branch, Clear Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 2,084 acre-feet per year (1.86 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Sanger under TPDES Permit No. WQ0014372001, as amended (Sanger WWTF); and
7. Aubrey Branch and the Elm Fork Trinity River, to convey not to exceed 616 acre-feet per year (0.55 mgd) of Lake Chapman-derived return flows authorized to be

discharged by the City of Aubrey under TPDES Permit No. WQ0013647001 (City of Aubrey WWTF); and

8. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTF); and
9. Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,805 acre-feet per year (15.0 mgd) of Lake Chapman-derived return flows authorized to be discharged by the City of Celina under TPDES Permit No. WQ0016068001 (Celina Legacy Hills Water Reclamation Facility (WRF)); and

WHEREAS, the Lake Chapman-derived return flows from:

1. Celina Downtown WWTF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek, Trinity River Basin located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County; and
2. Doe Branch Regional WRP will be discharged, at a maximum 2-hour rate 123.78 cfs (55,556 gpm), at a point on Doe Branch, Trinity River Basin located at Latitude 33.215660 °N, Longitude 96.902120 °W Denton County; and
3. Riverbend WRP will be discharged, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville), Trinity River Basin located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County; and
4. Peninsula Regional WRP will be discharged, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough, Trinity River Basin located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County; and
5. City of Krum WWTF will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm) at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and
6. Sanger WWTF will be discharged, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch, Trinity River Basin located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County; and
7. City of Aubrey WWTF will be discharged, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch, Trinity River Basin located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County; and
8. Sandbrock WWTF will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County; and
9. Celina Legacy Hills WRF will be discharged, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778 for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity River Water District Reuse of Chapman Lake Water - Accounting Plan*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. Permittee is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek, Ranger Branch, Clear Creek, Aubrey Branch, the Elm Fork Trinity River (Lake Lewisville), and the Elm Fork Trinity River to convey not to exceed the following amounts of Lake Chapman-derived surface water-based return flows for municipal and industrial purposes in Permittee's service area:

1. 16,805 acre-feet per year discharged from the City of Celina's Downtown WWTF, authorized by TPDES Permit No. WQ0014246001, as amended.
2. 22,406 acre-feet per year from UTRWD's Doe Branch Regional WRP, authorized by TPDES Permit No. WQ0010698003, as amended.
3. 11,203 acre-feet per year discharged from UTRWD's Riverbend WRP, authorized by TPDES Permit No. WQ0010698002, as amended.
4. 5,153 acre-feet per year discharged from UTRWD's Peninsula Regional WRP, authorized by TPDES Permit No. WQ0014323001, as amended.
5. 631.06 acre-feet per year discharged from the City of Krum's WWTF, authorized by



TPDES Permit No. WQ0010729001, as amended.

6. 2,084 acre-feet per year discharged from the City of Sanger's WWTF, authorized by TPDES Permit No. WQ0014372001, as amended.
  7. 616 acre-feet per year discharged by the City of Aubrey's WWTF, authorized by TPDES Permit No. WQ0013647001.
  8. 16,814.2838 acre-feet per year discharged from the Mustang Special Utility District's Sandbrock WWTF, authorized by TPDES Permit No. WQ0015536001.
  9. 16,805 acre-feet per year discharged by the City of Celina Legacy Hills WRF under TPDES Permit No. WQ0016068001.
- B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.
2. DISCHARGE POINTS AND RATES

Lake Chapman-derived return flows under this amendment will be discharged at the following locations and rates in the Trinity River Basin:

- A. Celina Downtown WWTF, at a maximum 2-hour rate of 92.83 cfs (41,667 gpm), at a point on an unnamed tributary of Little Elm Creek located at Latitude 33.332057 °N, Longitude 96.794259 °W in Collin County.
- B. Doe Branch Regional WRP, at a maximum 2-hour rate 123.78 cfs (55,556 gpm), at a point on Doe Branch located at Latitude 33.215660 °N, Longitude 96.902120 °W in Denton County.
- C. Riverbend WRP, at a maximum 2-hour rate of 61.89 cfs (27,777 gpm), at a point on Little Elm Creek (Lake Lewisville) located at Latitude 33.228600 °N, Longitude 96.937500 °W in Denton County.
- D. Peninsula Regional WRP, at a maximum 2-hour rate of 28.47 cfs (12,778 gpm), at a point on Cantrell Slough located at Latitude 33.208790 °N, Longitude 96.989552 °W in Denton County.
- E. City of Krum WWTF, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County.
- F. Sanger WWTF, at a maximum 2-hour rate of 10.88 cfs (4,882 gpm), at a point on Ranger Branch located at Latitude 33.354879 °N, Longitude 97.163873 °W in Denton County.
- G. City of Aubrey WWTF, at a maximum 2-hour rate of 2.55 cfs (1,146 gpm), at a point on Aubrey Branch located at Latitude 33.299759 °N, Longitude 96.992087 °W in Denton County.

- H. Sandbrock WWTF, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek located at Latitude 33.269722 °N, Longitude 96.915555 °W in Denton County.
- I. Celina Legacy Hills WRF, at a maximum 2-hour rate of 92.83 cfs (41,667 gm), at a point on Little Elm Creek located at Latitude 33.363614 °N, Longitude 96.828683 °W in Collin County.

3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan. This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.
- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water - Accounting Plan*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the

applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.

- F. Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, WQ0014372001, WQ0010698002, and be granted TPDES Permit No. WQ0016068001. Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits or amendments are not granted.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

-----  
For the Commission

Date Issued:


# Texas Commission on Environmental Quality

---

## INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager      Date: June 14, 2022  
Water Rights Permitting Team

Through: Leslie Patterson, Team Leader  
Resource Protection Team


From:  Kenneth Coonrod, Aquatic Scientist  
Resource Protection Team

Subject: Upper Trinity Regional Water District  
WRPERM 5778A  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

### **ENVIRONMENTAL ANALYSIS ADDENDUM**

Resource Protection staff completed its environmental analysis memorandum on September 20, 2021, and a draft amendment was provided to the Applicant on January 6, 2022 and a revised draft amendment was provided to the Applicant on March 8, 2022. On May 25, 2022, the Upper Trinity Regional Water District (UTRWD) provided an amended application.

Resource Protection staff has reviewed the amended application provided by UTRWD and determined that it does not affect the analyses and recommendations in the September 20, 2021 environmental analysis memorandum. Resource Protection staff has no further recommendations for the proposed amendment.

  
\_\_\_\_\_  
Kenneth Coonrod, Aquatic Scientist

# Texas Commission on Environmental Quality


## INTEROFFICE MEMORANDUM

**To:** Sarah Henderson, Project Manager  
Water Rights Permitting Team

**Date:** June 14, 2022

**Through:** Leslie Patterson, Team Leader  
Resource Protection Team

  
Kristin Wang, Senior Water Conservation Specialist  
Resource Protection Team



**From:** Jennifer Allis, Senior Water Conservation Specialist  
Resource Protection Team

**Subject:** Upper Trinity Regional Water District  
WRPERM 5778A  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

### WATER CONSERVATION ADDENDUM

Resource Protection staff completed its water conservation review memorandum on September 20, 2021. A draft amendment was provided to the Applicant on January 6, 2022 and a revised draft amendment was provided to the Applicant on March 8, 2022. On May 25, 2022, the Upper Trinity Regional Water District (UTRWD) provided an amended application.

Resource Protection staff has reviewed the amended application provided by UTRWD and determined that it does not affect the analyses and recommendations in the September 20, 2021 water conservation memorandum. Resource Protection staff has no further recommendations for the proposed amendment.



---

Jennifer Allis, Senior Water Conservation Specialist





Wastewater Treatment Plant	Discharge Volume in the Permit or Original Application	Discharge Volume in the Amended Application
Celina Downtown WWTF	0.95 MGD	15.0 MGD
Sanger WWTF	0.98 MGD	1.86 MGD
Aubrey WWTF	0	0.55 MGD
Celina Legacy Hills WRF	0	15.0 MGD

Staff reviewed current discharge information from Doe Branch WRP, Peninsula WRP, Riverbend WRP, Celina Downtown WWTF, and Sanger WWTF and determined that the current discharges were less than the amounts currently authorized for reuse under Water Use Permit 5778. In evaluating whether UTRWD's requested amendment to the permit would affect senior water rights, staff notes that no water rights can be affected because no water rights have been granted based on the additional discharges.

UTRWD submitted a revised accounting plan (Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables) that accounts for the return flows requested in the amended application. Staff reviewed the accounting plan and found it to be acceptable.

Staff recommends that the amended application be granted, that staff's previous recommendations be retained in the revised amendment, except for Paragraph 4.E. which should be revised as described below, and that the revised amendment include an additional special condition.

In lieu of Paragraph 4.E.

Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this permit, as amended, in excess of the amounts currently authorized by the applicable TPDES Permits on the date of this amendment, Permittee shall apply for and be granted the right to reuse those additional return flows.

#### Additional Special Condition

Prior to diversion and reuse of return flows under this amendment, Permittee or its customers shall apply for and be granted amendments to TPDES Permit Nos. WQ0014246001, WQ0014372001, WQ0010698002, and be granted TPDES Permit Nos. WQ0016068001. Permittee shall apply for an amendment to this permit if the appropriate applications for these TPDES Permits are not granted.

*Andrew Garcia*

---

Andrew Garcia, Hydrologist

## Sarah Henderson

---

**From:** Kathy Alexander  
**Sent:** Tuesday, September 13, 2022 8:41 AM  
**To:** James Aldredge  
**Cc:** Brooke McGregor; Sarah Henderson  
**Subject:** Re: UTRWD WRPERM No. 5778A - Application Amendment

James  
We received the submittal and have what we need to move forward.  
Thank you,  
Kathy

Kathy Alexander, PhD  
Water Availability Division

On Sep 13, 2022, at 8:35 AM, James Aldredge <[REDACTED]> wrote:

Hi Kathy. Just following up on my email from week-before-last. Can you confirm that you received it and that the revised Exhibit G includes the information you need to complete technical review for 5778A?



### JAMES ALDREDGE

Principal  
512-322-5859 Direct  
512-656-5104  
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---

**From:** James Aldredge  
**Sent:** Wednesday, August 31, 2022 11:29 AM  
**To:** 'Kathy Alexander' <kathy.alexander@tceq.texas.gov>

**Cc:** Brooke McGregor <brooke.mcgregor@tceq.texas.gov>; Sarah Henderson <sarah.henderson@tceq.texas.gov>

**Subject:** RE: UTRWD WRPERM No. 5778A - Application Amendment

Kathy, apologies for the delay on getting this to you. Is the attached revised Exhibit G narrative what you need for the accounting plan revisions?

---

**From:** Kathy Alexander <kathy.alexander@tceq.texas.gov>

**Sent:** Monday, July 25, 2022 1:49 PM

**To:** James Aldredge <[REDACTED]>

**Cc:** Brooke McGregor <brooke.mcgregor@tceq.texas.gov>; Sarah Henderson <sarah.henderson@tceq.texas.gov>

**Subject:** RE: UTRWD WRPERM No. 5778A - Application Amendment

James,

We are looking for an updated accounting plan spreadsheet document to line up with the updated Exhibit G you submitted on May 25, 2022. I'm attaching the documentation for the previous version of the accounting plan.

Kathy



Kathy Alexander, Ph.D.  
Policy and Technical Analyst  
Water Availability Division  
Office: 512-239-0778  
Mobile: 512-965-9603

---

**From:** James Aldredge <[REDACTED]>

**Sent:** Monday, July 25, 2022 12:46 PM

**To:** Kathy Alexander <kathy.alexander@tceq.texas.gov>

**Cc:** Brooke McGregor <brooke.mcgregor@tceq.texas.gov>; Sarah Henderson <sarah.henderson@tceq.texas.gov>

**Subject:** RE: UTRWD WRPERM No. 5778A - Application Amendment

Kathy, is the attached narrative supplement what you are looking for on the 5778A accounting plan? Or is the "text file" you need something different from this?



**JAMES ALDREDGE**

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**From:** James Aldredge

**Sent:** Tuesday, July 19, 2022 8:48 AM

**To:** Kathy Alexander - Texas Commission on Environmental Quality ([Kathy.Alexander@tceq.texas.gov](mailto:Kathy.Alexander@tceq.texas.gov))  
<[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>

**Cc:** Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; Sarah Henderson  
<[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>

**Subject:** RE: UTRWD WRPERM No. 5778A - Application Amendment

Good morning Kathy. Dropping a line to check on the status of your tech review on amended 5778A. Any info you can provide will be much appreciated!

Thanks,  
James

---

**From:** James Aldredge

**Sent:** Wednesday, May 25, 2022 2:41 PM

**To:** 'Sarah Henderson' <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>

**Cc:** [kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov); Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; Ronna P. Hartt ( [REDACTED] ); McDonald, Ellen <[ellen.mcdonald@tceq.texas.gov](mailto:ellen.mcdonald@tceq.texas.gov)>; 'McCann, Cody' <[cody.mccann@tceq.texas.gov](mailto:cody.mccann@tceq.texas.gov)>; Lauren Kalisek <[lauren.kalisek@tceq.texas.gov](mailto:lauren.kalisek@tceq.texas.gov)>

**Subject:** UTRWD WRPERM No. 5778A - Application Amendment

Sarah,

On behalf of Upper Trinity Regional Water District, please accept the attached amended application for Water Use Permit Amendment 5778A along with a few related attachments. As previously discussed with WAD staff, UTRWD hereby amends the application to authorize conveyance of water from several new or increased discharges in the Trinity River Basin that have been developed since the original application was filed in 2017.

We very much appreciate your willingness to work with us and your patience as we have worked to put this amendment together. We understand that by amending the application, WAD will need to conduct some additional limited technical review. As that process move forward, please do not hesitate to contact me if you have any questions or need any additional data or information.

Thanks,  
James

---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Friday, April 22, 2022 5:02 PM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Hi James,  
Please find the attached extension response.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, April 21, 2022 8:33 AM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; 'McDonald, Ellen' <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

UTRWD's engineering consultants are working with Kathy to develop an amended application. The process is taking a bit longer than anticipated, so we would like to request an additional 30 day extension of the comment deadline. That should run to May 25, 2022.

Thank you for your consideration of this request.

James

---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Friday, March 25, 2022 12:53 PM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,  
Please find the attached letter in response to your extension request.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087

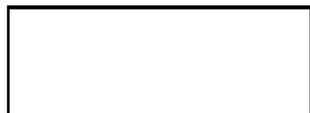
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**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, March 24, 2022 1:40 PM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

Apologies for the one-day delay on this; I was stuck at home all day caring for a sick child. Per a discussion I had with Kathy and Brooke last week, Upper Trinity requests a 30-day extension of the deadline to provide comments on the draft notice and amendment. Please calculate a new deadline, and let me know when that is when you get a chance.

Thanks,  
James



**JAMES ALDREDGE**  
Principal  
512-322-5859 Direct  
512-656-5104 Cell  
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---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Wednesday, March 9, 2022 10:47 AM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,

This acknowledges receipt, on February 8, 2022, of the applicants proposed revisions to the referenced draft notice and amendment.

Staff has made the requested changes and a clean copy of the revised drafts are attached for your review.

Any further comments are requested by March 23, 2022.

Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division

Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
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## Sarah Henderson

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Wednesday, August 31, 2022 11:29 AM  
**To:** Kathy Alexander  
**Cc:** Brooke McGregor; Sarah Henderson  
**Subject:** RE: UTRWD WRPERM No. 5778A - Application Amendment  
**Attachments:** Exhibit\_G\_Detailed\_Accounting\_Documentation\_20220523 (2).PDF

Kathy, apologies for the delay on getting this to you. Is the attached revised Exhibit G narrative what you need for the accounting plan revisions?

### JAMES ALDREDGE

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---

**From:** Kathy Alexander <kathy.alexander@tceq.texas.gov>  
**Sent:** Monday, July 25, 2022 1:49 PM  
**To:** James Aldredge <[REDACTED]>  
**Cc:** Brooke McGregor <brooke.mcgregor@tceq.texas.gov>; Sarah Henderson <sarah.henderson@tceq.texas.gov>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Application Amendment

James,  
We are looking for an updated accounting plan spreadsheet document to line up with the updated Exhibit G you submitted on May 25, 2022. I'm attaching the documentation for the previous version of the accounting plan.  
Kathy



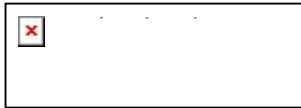
Kathy Alexander, Ph.D.  
Policy and Technical Analyst  
Water Availability Division  
Office: 512-239-0778  
Mobile: 512-965-9603

---

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**To:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>  
**Cc:** Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
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**JAMES ALDREDGE**



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<[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>  
**Cc:** Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Application Amendment

Good morning Kathy. Dropping a line to check on the status of your tech review on amended 5778A. Any info you can provide will be much appreciated!

Thanks,  
James

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**To:** 'Sarah Henderson' <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** [kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov); Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; Ronna P. Hartt  
[REDACTED] McDonald, Ellen <[REDACTED]>; 'McCann, Cody'

[REDACTED]; Lauren Kalisek <[REDACTED]>

**Subject:** UTRWD WRPERM No. 5778A - Application Amendment

Sarah,

On behalf of Upper Trinity Regional Water District, please accept the attached amended application for Water Use Permit Amendment 5778A along with a few related attachments. As previously discussed with WAD staff, UTRWD hereby amends the application to authorize conveyance of water from several new or increased discharges in the Trinity River Basin that have been developed since the original application was filed in 2017.

We very much appreciate your willingness to work with us and your patience as we have worked to put this amendment together. We understand that by amending the application, WAD will need to conduct some additional limited technical review. As that process move forward, please do not hesitate to contact me if you have any questions or need any additional data or information.

Thanks,  
James

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**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Friday, April 22, 2022 5:02 PM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Hi James,  
Please find the attached extension response.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, April 21, 2022 8:33 AM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; 'McDonald, Ellen' <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

UTRWD's engineering consultants are working with Kathy to develop an amended application. The process is taking a bit longer than anticipated, so we would like to request an additional 30 day extension of the comment deadline. That should run to May 25, 2022.

Thank you for your consideration of this request.

James

---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Friday, March 25, 2022 12:53 PM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,  
Please find the attached letter in response to your extension request.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, March 24, 2022 1:40 PM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

Apologies for the one-day delay on this; I was stuck at home all day caring for a sick child. Per a discussion I had with Kathy and Brooke last week, Upper Trinity requests a 30-day extension of the deadline to provide comments on the draft notice and amendment. Please calculate a new deadline, and let me know when that is when you get a chance.

Thanks,  
James

**JAMES ALDREDGE**  
Principal  
512-322-5859 Direct  
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Lloyd Gosselink Rochelle & Townsend, P.C.  
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[OUT NOW! Season Three: Listen In With Lloyd Gosselink Podcast](#)  
[News](#) | [vCard](#) | [LinkedIn](#) | [Bio](#)

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**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Wednesday, March 9, 2022 10:47 AM

To: James Aldredge <[REDACTED]>

Subject: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,

This acknowledges receipt, on February 8, 2022, of the applicants proposed revisions to the referenced draft notice and amendment.

Staff has made the requested changes and a clean copy of the revised drafts are attached for your review.

Any further comments are requested by March 23, 2022.

Sincerely,

Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
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# UPPER TRINITY REGIONAL WATER DISTRICT

## REUSE OF CHAPMAN LAKE WATER

### ACCOUNTING PLAN DETAILED DOCUMENTATION

Last Revised: May 23, 2022

#### Introduction

The purpose of this document is to provide a detailed explanation of each calculation contained in the Chapman Water Accounting Plan. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

#### Input Tables

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

##### **Table I-1**

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Lewisville Lake Water Surface Elevation, ft:</i>	Water surface elevation of Lewisville Lake at beginning of month, obtained from USACOE.
<i>Assumed WTP and Raw Water</i>	Losses between RWTP intake and RWTP

FIELD	DESCRIPTION
<i>Conveyance Losses, Regional WTP (L_RWTP):</i>	discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
<i>Doe Branch Channel Length, miles</i>	Length of Doe Branch between point of Chapman water discharge and Lewisville Lake. Updated as Lewisville Lake water surface elevation changes, using automatic lookup to Doe Branch Stream Distance Table (attached). Data in this table will be augmented by surveying or other appropriate data collection methods when water level falls below 515 ft.
<i>Doe Branch Losses (L_Doe)</i>	Computed Doe Branch losses, expressed as percentage of Chapman water entering Doe Branch. Computed as <i>Assumed Doe Branch Losses, %/mile</i> x <i>Doe Branch Channel Length, miles</i> .
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.



**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Treated CLW from HWTP (at WTP)</i>	Amount of treated Chapman Lake Water leaving the Harpool WTP. Metered value.
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.

**Table I-3**

This spreadsheet contains all daily input of measured discharges and any direct or indirect reuse losses from all District or customer wastewater treatment plants (WWTPs) participating in the Chapman Reuse program (shown in the summary table below). There are three columns of input data for each WWTP. A description of each column is provided below.



<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Measured Discharge</i>	Total amount of treated wastewater discharged from WWTP. Metered value.
<i>Direct Reuse Losses</i>	Any direct diversion of treated wastewater for direct reuse to a user (e.g. for irrigation) between the Measured Discharge meter location and the discharge. Metered value.
<i>Indirect Reuse Losses</i>	Any authorized diversion of treated wastewater (for indirect reuse) following discharge, not associated with this water right. Metered value.

Average daily discharge, from each WWTP, obtained from metered values, will be entered in the appropriate cells on this table. Discharge data is only required for those WWTPs that contribute return flows subsequently used by the District as part of the program.

### WWTPs Included in the Accounting Plan

<b>WWTP</b>	<b>Permitted Average Daily Flow* (MGD)</b>
<i>Lakeview Regional WWTP</i>	7.5
<i>Riverbend Regional WWTP</i>	10.0
<i>Peninsula Regional WWTP</i>	4.6
<i>Doe Branch Regional WWTP</i>	20.0
<i>Aubrey WWTP</i>	0.55
<i>Celina Downtown WWTP</i>	15.0
<i>Celina Legacy Hills WWTP</i>	15.0
<i>Krum WWTP</i>	0.7
<i>Sandbrock WWTP</i>	15.0
<i>Sanger WWTP</i>	1.86

\*Permits have been issued by TCEQ or are in the amendment/application process.

### Calculation Tables

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs

(both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

**Table C-1**

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW</i>	C1-1	District’s portion of Chapman Lake Water (from Table I-2, Column 2)
<i>CLW Diverted Directly to Harpool WTP</i>	C1-2	Amount of Chapman Lake water diverted directly to the future Harpool WTP (from Table I-2, Column 3)
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District’s portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch (from Table I-1)
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District’s portion of Chapman Lake water within Doe Branch. Computed quantity.
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 7).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 6)
<i>Total CLW Available for Distribution from both WTPs (at WTP)</i>	C1-7a	Total amount of Chapman Lake water available for distribution to Chapman Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 7).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to ALL Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to all water customers. Sum of daily metered values for all water customer meters, obtained from Table I-2 (includes other water customers).
<i>Total Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied to all Chapman Lake water customers. Sum of daily metered values from all Chapman water customer meters, obtained from Table I-2 (does not include other water customers).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at WTP)</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (e.g. Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLW and CLRW (at WTP)</i>	C1-11ab1	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP). (Col.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
		[11a] + Col. [11b])
<i>Unutilized CLW and CLRW (at Lake)</i>	C1-11ab2	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to intake). (Col. [11ab1]/(1-col. [6c]))
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers</i>	C1-12	Percentage of Chapman Lake water supplied to each Chapman Lake water customer. Computed quantity.
<i>Amount of Water Purchased by District from Dallas</i>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<i>Amount of Water Purchased by District from Denton</i>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<i>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</i>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake). Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<i>Chapman Lake Reuse Water used by District</i>	C1-15c	Amount of Chapman Lake Reuse Water used by District customers. Computer quantity.
<i>Available Chapman Lake Reuse Water (CLRW) (at WTP)</i>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<i>Potential CLRW Used by CL Customers</i>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] – [C1-10c]. Otherwise equal to zero.
<i>CLRW Used by CL Customers</i>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.
<i>Total Raw Water Withdrawal minus CLRW</i>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.
<i>Potential New CLW</i>	C1-19	Interim calculation. If [C1-18] is less

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Withdrawal (only if less than CLW Demand)</i>		than new CLW available then equal to [C1-18]. Otherwise equal to new CLW available ([C1-7a]).
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge from Customer (CWRF)</i>	C2-21	Portion of Chapman Lake water return flow in WWTP discharge attributed to this particular customer.
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
		(from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake. Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRF less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRF)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.
<i>Direct/Indirect Reuse</i>	C3-30	Amount of Chapman Lake water lost to

FIELD	COLUMN #	DESCRIPTION
<i>Losses</i>		direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.



<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

## Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.

## **Doe Branch Stream Distance Table**

This table provides an estimate of stream distance from the point where Chapman Lake water is discharged into Doe Branch (upstream of Lewisville Lake) to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses in Doe Branch. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

## **Stream Distance Lookup Table**

This table provides an estimate of stream distance from the point of discharge of each WWTP to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses from the discharge location to the lake. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

## Sarah Henderson

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Wednesday, May 25, 2022 2:41 PM  
**To:** Sarah Henderson  
**Cc:** Kathy Alexander; Brooke McGregor; Ronna P. Hartt [REDACTED]; McDonald, Ellen; 'McCann, Cody'; Lauren Kalisek  
**Subject:** UTRWD WRPERM No. 5778A - Application Amendment  
**Attachments:** 5778A Amendment Application - - Cover Letter from L. Patterson.PDF; 5778A\_Revised\_Amendment\_Documentation\_20220523.PDF; 5778A\_Revised\_Amendment\_Exhibits\_20220523.PDF; Exhibit\_G\_Accounting\_Tables\_20220523.XLSX; Aubrey WWTF Flow Data\_EPA ECHO.xlsx

Sarah,

On behalf of Upper Trinity Regional Water District, please accept the attached amended application for Water Use Permit Amendment 5778A along with a few related attachments. As previously discussed with WAD staff, UTRWD hereby amends the application to authorize conveyance of water from several new or increased discharges in the Trinity River Basin that have been developed since the original application was filed in 2017.

We very much appreciate your willingness to work with us and your patience as we have worked to put this amendment together. We understand that by amending the application, WAD will need to conduct some additional limited technical review. As that process move forward, please do not hesitate to contact me if you have any questions or need any additional data or information.

Thanks,  
James

### JAMES ALDREDGE

Principal  
512-322-5859 Direct  
[512-656-5104](tel:512-656-5104)



Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800

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**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Friday, April 22, 2022 5:02 PM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Hi James,  
Please find the attached extension response.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, April 21, 2022 8:33 AM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>; 'McDonald, Ellen' <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

UTRWD's engineering consultants are working with Kathy to develop an amended application. The process is taking a bit longer than anticipated, so we would like to request an additional 30 day extension of the comment deadline. That should run to May 25, 2022.

Thank you for your consideration of this request.

James

---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Friday, March 25, 2022 12:53 PM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,  
Please find the attached letter in response to your extension request.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality

---

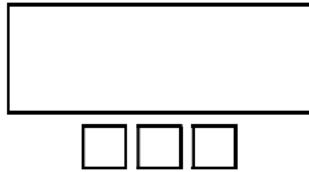
**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, March 24, 2022 1:40 PM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

Apologies for the one-day delay on this; I was stuck at home all day caring for a sick child. Per a discussion I had with Kathy and Brooke last week, Upper Trinity requests a 30-day extension of the deadline to provide comments on the draft notice and amendment. Please calculate a new deadline, and let me know when that is when you get a chance.

Thanks,  
James

**JAMES ALDREDGE**  
Principal  
512-322-5859 Direct  
512-656-5104 Cell  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800  
[OUT NOW! Season Three: Listen In With Lloyd Gosselink Podcast](#)  
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---

**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Wednesday, March 9, 2022 10:47 AM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,

This acknowledges receipt, on February 8, 2022, of the applicants proposed revisions to the referenced draft notice and amendment.

Staff has made the requested changes and a clean copy of the revised drafts are attached for your review. Any further comments are requested by March 23, 2022.

Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160

Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

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P.O. Box 305 • Lewisville, TX 75067

(972) 219-1228 • www.utrwd.com

May 25, 2022

Ms. Sarah Henderson  
Project Manager, Water Rights Permitting Team  
Texas Commission on Environmental Quality (MC 160)  
P.O. Box 13087  
Austin, Texas 78711-3087

Re: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise Counties

Dear Ms. Henderson:

Upper Trinity Regional Water District ("UTRWD") respectfully submits the enclosed amendment to its application to amend Water Use Permit No. 5778. The application amendment is necessary to authorize conveyance of new or increased return flows from several existing or proposed wastewater treatment facilities within UTRWD's service area. Since originally submitting the application in August of 2017, UTRWD has obtained major amendments increasing flows at three of its own treatment facilities. During that same time, two of UTRWD's customers have also increased discharge capacity or have constructed new treatment facilities. UTRWD desires that the final 5778A permit amendment recognize UTRWD's intent and authorize UTRWD's conveyance of these return flows within the Trinity River Basin.

If you have any questions regarding the Application, please do not hesitate to contact me at (972) 219-1228 or UTRWD's attorney, James Aldredge, at (512)322-5859.

Sincerely,

A handwritten signature in blue ink that reads "Larry N. Patterson".

Larry N. Patterson, P.E.  
Executive Director

Enclosures (Supplemental Amendment Application)

Copy: Kathy Alexander, Water Availability Division (with enclosures)  
Brooke McGregor, Water Availability Division (with enclosures)  
Ronna Hartt, UTRWD (with enclosures)  
Ellen McDonald, Plummer (with enclosures)  
Cody McCann, Plummer (with enclosures)  
James Aldredge, Lloyd Gosselink Rochelle (with enclosures)





# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

## TCEQ WATER RIGHTS PERMITTING APPLICATION

### ADMINISTRATIVE INFORMATION CHECKLIST

Complete and submit this checklist for each application. See Instructions Page. 5.

APPLICANT(S): UPPER TRINITY REGIONAL WATER DISTRICT

Indicate whether the following items are included in your application by writing either Y (for yes) or N (for no) next to each item (all items are not required for every application).

Y/N

- Administrative Information Report**
- Additional Co-Applicant Information
- Additional Co-Applicant Signature Pages
- Written Evidence of Signature Authority
- Technical Information Report**
- USGS Map (or equivalent)
- Map Showing Project Details
- Original Photographs
- Water Availability Analysis
- Worksheet 1.0**
- Recorded Deeds for Irrigated Land
- Consent For Irrigation Land
- Worksheet 1.1**
- Addendum to Worksheet 1.1
- Worksheet 1.2**
- Addendum to Worksheet 1.2
- Worksheet 2.0**
- Additional W.S 2.0 for Each Reservoir
- Dam Safety Documents
- Notice(s) to Governing Bodies
- Recorded Deeds for Inundated Land
- Consent For Inundation Land

Y/N

- Worksheet 3.0**
- Additional W.S 3.0 for each Point
- Recorded Deeds for Diversion Points
- Consent For Diversion Access
- Worksheet 4.0**
- TPDES Permit(s)
- Y - Aubrey WWTP Discharge Data
- 24-hour Pump Test
- Groundwater Well Permit
- Signed Water Supply Contract
- Worksheet 4.1**
- Worksheet 5.0**
- Addendum to Worksheet 5.0
- Worksheet 6.0**
- Water Conservation Plan(s)
- Drought Contingency Plan(s)
- Documentation of Adoption
- Worksheet 7.0**
- Accounting Plan
- Worksheet 8.0**
- Fees

**For Commission Use Only:**

Proposed/Current Water Right Number: \_\_\_\_\_

Basin: \_\_\_\_\_ Watermaster area Y/N: \_\_\_\_\_

# ADMINISTRATIVE INFORMATION REPORT

The following information is required for all new applications and amendments.

**\*\*\* Applicants are strongly encouraged to schedule a pre-application meeting with TCEQ Staff to discuss Applicant's needs prior to submitting an application. Call the Water Rights Permitting Team to schedule a meeting at (512) 239-4600.**

## 1. TYPE OF APPLICATION (Instructions, Page. 6)

Indicate, by marking X, next to the following authorizations you are seeking.

New Appropriation of State Water

Amendment to a Water Right \*

Bed and Banks

***\*If you are seeking an amendment to an existing water rights authorization, you must be the owner of record of the authorization. If the name of the Applicant in Section 2, does not match the name of the current owner(s) of record for the permit or certificate or if any of the co-owners is not included as an applicant in this amendment request, your application could be returned. If you or a co-applicant are a new owner, but ownership is not reflected in the records of the TCEQ, submit a change of ownership request (Form TCEQ-10204) prior to submitting the application for an amendment. See Instructions page. 6. Please note that an amendment application may be returned, and the Applicant may resubmit once the change of ownership is complete.***

Please summarize the authorizations or amendments you are seeking in the space below or attach a narrative description entitled "Summary of Request."

**See Second Supplement to the Application.**

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**2. APPLICANT INFORMATION (Instructions, Page. 6 )**

**a. Applicant**

Indicate the number of Applicants/Co-Applicants 1  
(Include a copy of this section for each Co-Applicant, if any)

What is the Full Legal Name of the individual or entity (applicant) applying for this permit?

**UPPER TRINITY REGIONAL WATER DISTRICT**

*(If the Applicant is an entity, the legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)*

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at

<http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch>

CN : CN600639272 ( leave blank if you do not yet have a CN).

What is the name and title of the person or persons signing the application? Unless an application is signed by an individual applicant, the person or persons must submit written evidence that they meet the signatory requirements in 30 TAC § 295.14.

First/Last Name: **Larry N. Patterson**

Title: **Executive Director**

Have you provided written evidence meeting the signatory requirements in 30 TAC § 295.14, as an attachment to this application? **See Exhibit D to Supplemer**

What is the applicant’s mailing address as recognized by the US Postal Service (USPS)? You may verify the address on the USPS website at

<https://tools.usps.com/go/ZipLookupAction!input.action>.

Name: **Upper Trinity Regional Wate**

Mailing Address: **P.O. Box 305**

City: **Lewisville**

State: **TX**

ZIP Code: **75067**

Indicate an X next to the type of Applicant:

- |  |   |
|--|---|
| <input type="checkbox"/> Individual                  | <input type="checkbox"/> Sole Proprietorship-D.B.A. |
| <input type="checkbox"/> Partnership                 | <input type="checkbox"/> Corporation                |
| <input type="checkbox"/> Trust                       | <input type="checkbox"/> Estate                     |
| <input type="checkbox"/> Federal Government          | <input type="checkbox"/> State Government           |
| <input type="checkbox"/> County Government           | <input type="checkbox"/> City Government            |
| <input checked="" type="checkbox"/> Other Government | <input type="checkbox"/> Other _____                |

For Corporations or Limited Partnerships, provide:

State Franchise Tax ID Number: N/A SOS Charter (filing) Number: N/A

### 3. APPLICATION CONTACT INFORMATION (Instructions, Page. 9)

If the TCEQ needs additional information during the review of the application, who should be contacted? Applicant may submit their own contact information if Applicant wishes to be the point of contact.

First and Last Name: Ellen McDonald, PhD., PE

Title: Principal, Water Planning Pi

Organization Name: Plummer Associates, Inc.

Mailing Address: 1320 S. University Drive, Su

City: Fort Worth

State: TX

ZIP Code: 76107

Phone No.: 817-806-1714

Extension:

Fax No.:

E-mail Address|



#### 4. WATER RIGHT CONSOLIDATED CONTACT INFORMATION (Instructions, Page. 9)

This section applies only if there are multiple Owners of the same authorization. Unless otherwise requested, Co-Owners will each receive future correspondence from the Commission regarding this water right (after a permit has been issued), such as notices and water use reports. Multiple copies will be sent to the same address if Co-Owners share the same address. Complete this section if there will be multiple owners and all owners agree to let one owner receive correspondence from the Commission. Leave this section blank if you would like all future notices to be sent to the address of each of the applicants listed in section 2 above.

I/We authorize all future notices be received on my/our behalf at the following:

First and Last Name: N/A  
Title: N/A  
Organization Name: N/A  
Mailing Address: N/A  
City: N/A State: N/A ZIP Code: N/A  
Phone No.: N/A Extension: N/A  
Fax No.: N/A E-mail Address: N/A

**5. MISCELLANEOUS INFORMATION (Instructions, Page. 9)**

a. The application will not be processed unless all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol by all applicants/co-applicants. If you need assistance determining whether you owe delinquent penalties or fees, please call the Water Rights Permitting Team at (512) 239-4600, prior to submitting your application.

1. Does Applicant or Co-Applicant owe any fees to the TCEQ? **Yes / No** **No**

If **yes**, provide the following information:

Account number: **N/A** Amount past due: **N/A**

2. Does Applicant or Co-Applicant owe any penalties to the TCEQ? **Yes / No** **No**

If **yes**, please provide the following information:

Enforcement order number: **N/A** Amount past due: **N/A**

b. If the Applicant is a taxable entity (corporation or limited partnership), the Applicant must be in good standing with the Comptroller or the right of the entity to transact business in the State may be forfeited. See Texas Tax Code, Subchapter F. Applicant's may check their status with the Comptroller at <https://mycpa.cpa.state.tx.us/coa/>

Is the Applicant or Co-Applicant in good standing with the Comptroller? **Yes / No** **N/A**

c. The commission will not grant an application for a water right unless the applicant has submitted all Texas Water Development Board (TWDB) surveys of groundwater and surface water use - if required. See TWC §16.012(m) and 30 TAC § 297.41(a)(5).

Applicant has submitted all required TWDB surveys of groundwater and surface water? **Yes / No** **Yes**

**6. SIGNATURE PAGE (Instructions, Page. 11)**

Applicant:

I, Larry N. Patterson, Executive Director  
(Typed or printed name) (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under Title 30 Texas Administrative Code §295.14 to sign and submit this document and I have submitted written evidence of my signature authority.

Signature: Larry N. Patterson Date: 5/24/2022  
(Use blue ink)

Subscribed and Sworn to before me by the said

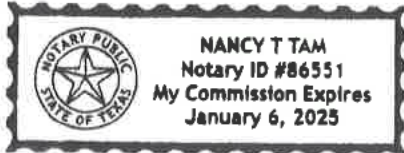
on this 24<sup>th</sup> day of May, 2022.

My commission expires on the 6<sup>th</sup> day of January, 2025.

Notary Public

[SEAL]

County, Texas DENTON COUNTY



***If the Application includes Co-Applicants, each Applicant and Co-Applicant must submit an original, separate signature page***

# WORKSHEET 4.0

## DISCHARGE INFORMATION

This worksheet required for any requested authorization to discharge water into a State Watercourse for conveyance and later withdrawal or in-place use. Worksheet 4.1 is also required for each Discharge point location requested. **Instructions Page. 26. Applicant is responsible for obtaining any separate water quality authorizations which may be required and for insuring compliance with TWC, Chapter 26 or any other applicable law.**

- a. The purpose of use for the water being discharged will be Municipal and Industrial.
- b. Provide the amount of water that will be lost to transportation, evaporation, seepage, channel or other associated carriage losses 0.3 % and explain the method of calculation: approved by TCEQ, conveyance losses of 0.3% per mile of conveyance along streams used for conveyance of Chapman Lake return flows

Is the source of the discharged water return flows? Y / N Y If yes, provide the following information:

1. The TPDES Permit Number(s). See attached Second Supplement to the Application (attach a copy of the **current** TPDES permit(s))
2. Applicant is the owner/holder of each TPDES permit listed above? Y / N N

*PLEASE NOTE: If Applicant is not the discharger of the return flows, the application should be submitted under Section 1, New or Additional Appropriation of State Water, as a request for a new appropriation of state water. If Applicant is the discharger, then the application should be submitted under Section 3, Bed and Banks.*

3. Monthly WWTP discharge data for the past 5 years in electronic format. (Attach and label as "Supplement to Worksheet 4.0").
  4. The percentage of return flows from groundwater 0%, surface water 100%?
  5. If any percentage is surface water, provide the base water right number(s) Permit No. 5778.
- c. Is the source of the water being discharged groundwater? Y / N N If yes, provide the following information:

1. Source aquifer(s) from which water will be pumped: N/A
2. Any 24 hour pump test for the well if one has been conducted. If the well has not been constructed, provide production information for wells in the same aquifer in the area of the application. See <http://www.twdb.texas.gov/groundwater/data/gwdbbrpt.asp>. Additionally, provide well numbers or identifiers N/A.
3. Indicate how the groundwater will be conveyed to the stream or reservoir. N/A
4. A copy of the groundwater well permit if it is located in a Groundwater Conservation District (GCD) or evidence that a groundwater well permit is not required.

ci. Is the source of the water being discharged a surface water supply contract? Y / N N  
If yes, provide the signed contract(s).

cii. Identify any other source of the water N/A



# WORKSHEET 4.1

## DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).  
**Instructions, Page 27.**

### Doe Branch WRP

For water discharged at this location provide:

- a. The amount of water that will be discharged at this point is 22,406 acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of 123.78 cfs or 55,556 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Doe Branch, tributary of Lake Lewisville
- d. Zip Code 75068
- f. Location of point: In the Jose Gonzales Original Survey No.           , Abstract No. 447, Denton County, Texas.
- g. Point is at:  
Latitude 33.215660 °N, Longitude 96.902120 °W.  
*\*Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): TCEQ Wastewater Outfalls online ArcGIS webmap

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

# WORKSHEET 4.1

## DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).  
**Instructions, Page 27.**

### Peninsula WRP

For water discharged at this location provide:

- a. The amount of water that will be discharged at this point is 5,153 acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of 28.47 cfs or 12,778 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Cantrell Slough, tributary of Lake Lewisville
- d. Zip Code 76227
- f. Location of point: In the Marsella Jones Original Survey No. \_\_\_\_\_, Abstract No. 662, Denton County, Texas.
- g. Point is at:  
Latitude 33.208790 °N, Longitude 96.989552 °W.  
*\*Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): TCEQ Wastewater Outfalls online ArcGIS webmap

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

# WORKSHEET 4.1

## DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).  
**Instructions, Page 27.**

### Riverbend WRP

For water discharged at this location provide:

- a. The amount of water that will be discharged at this point is 11,203 acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of 61.89 cfs or 27,777 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Lake Lewisville
- d. Zip Code 76227
- f. Location of point: In the Thomas Naro Original Survey No. \_\_\_\_\_, Abstract No. 964, Denton County, Texas.
- g. Point is at:  
Latitude 33.228600 °N, Longitude 96.937500 °W.  
*\*Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): TCEQ Wastewater Outfalls online ArcGIS webmap

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

# WORKSHEET 4.1

## DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).  
**Instructions, Page 27.**

### Celina Downtown WWTF

For water discharged at this location provide:

- a. The amount of water that will be discharged at this point is 16,805 acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of 92.83 cfs or 41,667 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Unnamed tributary of Little Elm Creek, tributary of Lake Lewisville
- d. Zip Code 75009
- f. Location of point: In the T&P RR CO. Original Survey No. \_\_\_\_\_, Abstract No. 932, Collin County, Texas.
- g. Point is at:  
Latitude 33.332057 °N, Longitude 96.794259 °W.  
*\*Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): TCEQ Wastewater Outfalls online ArcGIS webmap

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

# WORKSHEET 4.1

## DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).  
**Instructions, Page 27.**

### Sanger WWTF

For water discharged at this location provide:

- a. The amount of water that will be discharged at this point is 2,084 acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of 10.88 cfs or 4,882 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Ranger Branch, tributary of Lake Lewisville
- d. Zip Code 76266
- f. Location of point: In the H. Tierwester Original Survey No. \_\_\_\_\_, Abstract No. 1241, Denton County, Texas.
- g. Point is at:  
Latitude 33.354879 °N, Longitude 97.163873 °W.  
*\*Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): TCEQ Wastewater Outfalls online ArcGIS webmap

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

# WORKSHEET 4.1

## DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).  
**Instructions, Page 27.**

### Aubrey WWTF

**For water discharged at this location provide:**

- a. The amount of water that will be discharged at this point is 616 acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of 2.55 cfs or 1,146 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Aubrey Branch, tributary of Elm Fork Trinity River below Ray Roberts
- d. Zip Code 76227
- f. Location of point: In the D. Cowen Original Survey No. \_\_\_\_\_, Abstract No. 304, Denton County, Texas.
- g. Point is at:  
Latitude 33.299759 °N, Longitude 96.992087 °W.  
*\*Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): TCEQ Wastewater Outfalls online ArcGIS webmap

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

# WORKSHEET 4.1

## DISCHARGE POINT INFORMATION

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g. maps).  
**Instructions, Page 27.**

### Celina Legacy Hills WRF

For water discharged at this location provide:

- a. The amount of water that will be discharged at this point is 16,805 acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.
- b. Water will be discharged at this point at a maximum rate of 92.83 cfs or 41,667 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Little Elm Creek, tributary of Lake Lewisville
- d. Zip Code 75009
- f. Location of point: In the J. Queen Original Survey No. \_\_\_\_\_, Abstract No. 733, Collin County, Texas.
- g. Point is at:  
Latitude 33.363614 °N, Longitude 96.828683 °W.  
*\*Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*
- h. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program): TCEQ Wastewater Outfalls online ArcGIS webmap

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

**SECOND SUPPLEMENT TO  
APPLICATION TO AMEND  
WATER USE PERMIT NO. 5778**

**PURSUANT TO  
TEXAS WATER CODE §§ 11.042(c) and 11.122**

**UPPER TRINITY REGIONAL WATER DISTRICT**

In addition to the Texas Commission on Environmental Quality (“TCEQ” or the “Commission”) Application Form (Form 10201), a narrative description of the amendment to Water use Permit No. 5778 sought by Upper Trinity Regional Water District (“UTRWD”) in the Application (the “Application”) is provided in this second supplement (April 2022) to the Application. Since the original Application to amend Permit No. 5778 was submitted (August 2017), UTRWD’s service area and customers have grown, and this second supplement includes additional changes to be included in the Application to reflect UTRWD’s system growth. This narrative is intended to supplement the original narrative included with the August 2017 Application. The following documents are also attached as Exhibits:

- A. UTRWD Doe Branch Regional Water Reclamation Plant TPDES Permit No. WQ0010698003
- B. UTRWD Peninsula Water Reclamation Plant TPDES Permit No. WQ0014323001
- C. City of Aubrey TPDES Permit No. WQ0013647001
- D. Authority to File Application
- E. Updated Vicinity Map
- F. Photographs of Celina Legacy Hills WRF Outfall Location
- G. Updated Accounting Plan
- H. UTRWD’s Water Conservation Plan
- I. UTRWD’s Drought Contingency Plan

**I. Background Information**

UTRWD’s service area has seen significant growth in the years since the original amendment Application was submitted to the TCEQ. The previous amendment request sought to divert, and reuse return flow volumes from the Krum WWTP, Texas Pollutant Discharge Elimination System (“TPDES”) Permit No. WQ0010729001, in addition to those previously authorized and to add an authorization to divert and reuse all return flows from the new Sandbrock WWTP, TPDES Permit No. WQ0015536001. This second supplement provides information related to additional amendments and authorizations requested to be included in the Application by UTRWD. By agreement with Water Availability Division staff, UTRWD chooses to amend the Water Use Permit 5778A application to add these new and increased return flows rather than file a separate application to amend Permit 5778.

As currently issued, Permit No. 5778 includes several additional WWTPs discharging return flows that UTRWD is authorized to reuse (other than the Krum WWTP) including the City of Celina’s (Downtown) Wastewater Treatment Facility (“WWTF”), the City of Sanger’s WWTF, and UTRWD’s Doe Branch, Peninsula, and Riverbend Water Reclamation Plants (“WRPs”). Since



the original Application was submitted, TCEQ has issued major amendments (or applications for amendments are in progress) for several of these facilities to increase permitted treatment capacity and discharge rates.

The City of Celina has applied for a major amendment to TPDES Permit No. WQ0014246001, which would authorize the City of Celina to increase its maximum permitted discharge from 0.95 MGD to 15.0 MGD at the Downtown WWTF. Additionally, the City of Celina has also applied for a new TPDES Permit (No. WQ0016068001) which would grant the City of Celina the authority to discharge no more than 15.0 MGD of treated domestic effluent from the new Legacy Hills Water Reclamation Facility (“WRF”) into a tributary of Lake Lewisville. Both applications are currently under technical review by the Water Quality Division (“WQD”). These TPDES applications should be considered as concurrent to this water rights application.

The City of Sanger is currently in the process of applying for a major amendment to TPDES Permit No. WQ0014372001, considered concurrent to this application, which would authorize the City of Sanger to increase its maximum permitted discharge from 0.98 MGD to 1.86 MGD. WQD has completed technical review, and a notice of preliminary decision was mailed by the Chief Clerk on April 18, 2022.

TCEQ has issued major amendments to TPDES Permit Nos. WQ0010698003 and WQ0014323001, authorizing increases in maximum permitted discharge for UTRWD’s Doe Branch WRP and Peninsula WRP, respectively. Doe Branch WRP was authorized to increase its maximum permitted discharge of treated effluent from 5.225 MGD to 20.0 MGD. A copy of TPDES Permit No. WQ0010698003 is attached hereto as **Exhibit A**. Peninsula WRP was authorized to increase its maximum permitted discharge of treated effluent from 2.0 MGD to 4.6 MGD. A copy of TPDES Permit No. WQ0014323001 is attached hereto as **Exhibit B**.

UTRWD is currently in the process of applying for a major amendment to TPDES Permit No. WQ0010698002, considered concurrent to this application, which would authorize UTRWD’s Riverbend WRP to increase its maximum permitted discharge from 5.7 MGD to 10.0 MGD. WQD has completed technical review and issued a draft permit to UTRWD.

Additionally, on August 16, 2021, TCEQ issued a renewal for TPDES Permit No. WQ0013647001 to the City of Aubrey, which authorizes discharge not to exceed 0.55 MGD of treated domestic effluent into Aubrey Branch, thence to the Elm Fork Trinity River Below Ray Roberts Lake, thence to Lake Lewisville from the Aubrey WWTF. Aubrey receives treated drinking water from UTRWD’s regional system. Therefore, these return flows are Lake Chapman-derived. A copy of TPDES Permit No. WQ0013647001 is attached hereto as **Exhibit C**.

In summary, by this revised Application, in addition to the return flows previously requested for the Krum WWTP the new Sandbrock WWTP, UTRWD is seeking to further amend the Permit to authorize UTRWD to divert and reuse all return flows from the Celina Downtown WWTF, the Doe Branch WRP, the Peninsula WRP, and the Riverbend WRP in accordance with the recently amended TPDES permits underlying those discharges, or TPDES permit applications considered concurrent to this application. In addition, UTRWD is seeking to amend the Permit to add an authorization to divert and reuse all return flows from the new Celina Legacy Hills WRF and the Aubrey WWTF, including an authorization to use the bed and banks of Aubrey Branch,

the Elm Fork Trinity River below Ray Roberts Lake, Little Elm Creek, and Doe Branch to divert and reuse such return flows.

## **II. Authorization for Filing Application**

On or about August 3, 2017, the UTRWD's Board of Directors adopted a resolution authorizing the filing of the Application. A copy of the resolution is attached hereto as **Exhibit D**. By this amended Application, the District seeks to amend its water right to increase the amount of return flows UTRWD is authorized to divert and reuse from the wastewater treatment facilities listed above in accordance with the recent amendments to the underlying TPDES permits and to add authorization for UTRWD to discharge and divert and use the bed and banks of the aforementioned tributaries to reuse all return flows from Celina's, and Aubrey's wastewater treatment facilities.

## **IV. Source of Supply**

The source of water associated with this revised Application is Lake Chapman-derived return flows discharged from the Celina Downtown WWTF, the Sanger WWTF, the Doe Branch WRP, the Peninsula WRP, the Riverbend WRP, Celina's Legacy Hills WRF, and the Aubrey WWTF. The location of all discharge points associated with the Permit are detailed on the revised vicinity map, which is attached hereto as **Exhibit E**. Photographs that depict the location of the Celina Legacy Hills WRF outfall location were excerpted from the Celina application for the Legacy Hills WRF and are attached hereto as **Exhibit F**.

## **V. Amount and Purpose of Diversion and Use**

By this amended Application, UTRWD seeks to amend the Permit to reflect the newly-permitted discharges into Lake Lewisville and tributaries of Lake Lewisville. Specifically, UTRWD seeks:

- to amend the permitted average daily flow from UTRWD's Doe Branch WRP to reflect the recent increase from 5.225 MGD to 20.0 MGD;
- to amend the permitted average daily flow from UTRWD's Peninsula WRP to reflect the recent increase from 2.0 MGD to 4.6 MGD;
- to amend the permitted average daily flow from UTRWD's Riverbend WRP to reflect the concurrent TPDES application increase from 5.7 MGD to 10.0 MGD;
- to amend the permitted average daily flow from Celina's Downtown WWTF to reflect the concurrent TPDES application increase from 0.95 MGD to 15.0 MGD; and
- to amend the permitted average daily flow from Sanger's WWTF to reflect the concurrent TPDES application increase from 0.98 MGD to 1.86 MGD.

Additionally, UTRWD seeks to add to the Permit the return flows associated with the permitted discharge at Aubrey's WWTF up to the permitted daily average flow of 0.55 MGD; and

to add return flows associated with the permitted discharge at the new Celina Legacy Hills WRF up to the concurrent TPDES application daily average flow of 15.0 MGD.

UTRWD does not seek to amend the Permit to increase the total amount of return flows UTRWD is authorized to reuse (9,664 acre-feet per year). Rather, UTRWD seeks to amend the Permit to identify additional discharges from which those return flows can be derived. Thus, UTRWD will continue to divert the lesser of the total 9,664 acre-feet per year or that portion of 9,664 acre-feet that is actually discharged less conveyance losses and determined to be available to diversion and reuse in accordance with the UTRWD accounting plan, as described in the Permit (the "Accounting Plan"). As required by the Permit, the Accounting Plan tracks i) actual quantities of Lake Chapman water imported into the basin; and ii) the actual amount of return flows originally sourced by Lake Chapman-derived water discharged by UTRWD and member or customer WWTPs. An updated Accounting Plan is attached hereto as **Exhibit G**.

## **VI. Diversion Information**

UTRWD does not seek to amend its current authorization that the diversion rate of Lake-Chapman derived return flows from the Joint Lewisville/UTRWD Intake Structure will not exceed a peak daily rate of more than 43.2 MGD.

## **VII. Return and Surplus Water**

UTRWD seeks authorization to reuse the return flows that will be associated with the increased discharge from the aforementioned wastewater treatment facilities and the discharge from Aubrey's WWTF and Celina's Legacy Hills WRF so that existing and future water rights holders will not come to rely upon the availability of such return flows from this source.

All return flows authorized for diversion under the proposed amendment are sourced from interbasin transfer water from the Sulphur River Basin. Consequently, the return flows that are the subject of this amended Application are out of priority in the Trinity River Basin. Nevertheless, any surplus waters not reused will be returned to the Trinity River Basin.

## **VIII. Authorization to Use Bed and Banks Pursuant to Texas Water Code § 11.042(c)**

UTRWD requests authorization to use the bed and banks of Aubrey Branch, Doe Branch, Little Elm Creek and then tributaries of the Trinity River to transport return flows from the aforementioned TPDES discharge points to UTRWD's diversion point and for the additional, increased discharge of return flows from the previously authorized discharge points.

## **IX. Water Conservation, Drought Contingency and Avoidance of Waste**

UTRWD has adopted a Water Conservation and Drought Contingency Plan that has been submitted to and approved by TCEQ pursuant to the requirements of 30 Texas Administrative Code ("TAC") Chapter 288. A copy of UTRWD's Water Conservation and Drought Contingency Plan are attached as **Exhibit H** and **Exhibit I**.

As defined in Texas Water Code § 11.002(8) (and mirrored in 30 TAC § 295.9), "conservation" means those practices that will "reduce the consumption of water, reduce the loss

or waste of water, *improve the efficiency in the use of water, or increase the recycling and reuse of water* so that a water supply is made available for future or alternative uses.” [emphasis added]. By granting the Application, UTRWD will have the flexibility to more efficiently utilize its water supplies. Such efficiency, along with UTRWD’s water conservation and drought contingency plan, will allow UTRWD to address current and future water supply needs in this area of the state in a manner that will allow the avoidance of waste and the achievement of water conservation.

# **Exhibit A**



TPDES PERMIT NO.  
WQ0010698003  
*[For TCEQ office use only - EPA I.D.  
No. TX0125172]*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

This major amendment supersedes and replaces TPDES Permit No. WQ0010698003 issued on January 30, 2017.

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

Upper Trinity Regional Water District

whose mailing address is

P.O. Box 305  
Lewisville, Texas 75067

is authorized to treat and discharge wastes from the Doe Branch Regional Water Reclamation Plant , SIC Code 4952

located at 27200 U.S. Highway 380 East, Little Elm, in Denton County, Texas 75068

to an unnamed tributary, thence to Doe Branch portion of Lewisville Lake in Segment No. 0823 of the Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE: February 3, 2022

A handwritten signature in black ink, appearing to read "T. G. Baker".

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For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 4.0 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 2.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,167 gallons per minute.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)					Two/week	Composite
April – September	7 (117)	11	17	25		
October-March	10 (167)	15	25	35		
Total Suspended Solids	15 (249)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April - September	2 (33)	5	10	15	Two/week	Composite
October - March	4 (67)	6	10	15	Two/week	Composite
Total Phosphorus	1.0 (N/A)	2	N/A	N/A	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l (April-September), 5.0 (October-March) and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 4.0 million gallons per day (MGD) facility and lasting through the completion of expansion to the 11.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 4.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 11,111 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April – September	5 (167)	10	20	30	Two/week	Composite
October-March	10 (334)	15	25	35	Two/week	Composite
Total Suspended Solids						
April - September	12 (400)	20	40	60	Two/week	Composite
October - March	15 (500)	25	40	60	Two/week	Composite
Ammonia Nitrogen						
April - September	1.7 (56)	5	10	15	Two/week	Composite
October - March	4 (133)	6	10	15	Two/week	Composite
Total Phosphorus	1.0 (N/A)	2	N/A	N/A	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 5.0 mg/l (April-September), 4.0 (October-March) and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.



INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 11.0 million gallons per day (MGD) facility and lasting through the completion of expansion to the 20.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 11.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 30,556 gallon per minute.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Daily Max. Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April - September	5 (459)	10	20	30	One/day	Composite
October - March	10 (918)	15	25	35	One/day	Composite
Total Suspended Solids						
April - September	12 (1096)	20	40	60	One/day	Composite
October - March	15 (1377)	25	40	60	One/day	Composite
Ammonia Nitrogen						
April - September	1.4 (129)	5	10	15	One/day	Composite
October - March	3 (275)	6	10	15	One/day	Composite
Total Phosphorus	(16,743)*	N/A	2.0	N/A	One/day	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

\*based on a 0.5 mg/l daily average

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per day by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l (April-September), 5.0 mg/l (October-March) and shall be monitored once per day by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 20.0 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 20.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 55,556 gallon per minute.

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Daily Max. Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)						
April - September	5 (835)	10	20	30	One/day	Composite
October - March	7 (1168)	11	17	25	One/day	Composite
Total Suspended Solids						
April-September	12 (2,001)	20	40	60	One/day	Composite
October-March	15 (2502)	25	40	60	One/day	Composite
Ammonia Nitrogen						
April - September	1.4 (234)	5	10	15	One/day	Composite
October - March	3 (501)	6	10	15	One/day	Composite
Total Phosphorus	(30,441)*	N/A	2.0	N/A	One/day	Composite
Total Dissolved Solid	Report (Report)	N/A	Report	N/A	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

\*based on a 0.5 mg/l daily average

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per day by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l (April-September), 5.0 mg/l (October-March) and shall be monitored once per day by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

## DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

### 1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

### 2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Compliance Monitoring Team of the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Compliance

Monitoring Team of the Enforcement Division (MC 224).

#### 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Compliance Monitoring Team of the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.



**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions

established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or

- iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee and the permit number(s);
  - ii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iii. the date of filing of the petition.

## **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC §

7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

- a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the

Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 221) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
  - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel,

appurtenance, or other improvement on land used to manage industrial solid waste.

- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
  - i. Volume of waste and date(s) generated from treatment process;
  - ii. Volume of waste disposed of on-site or shipped off-site;
  - iii. Date(s) of disposal;
  - iv. Identity of hauler or transporter;
  - v. Location of disposal site; and
  - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

TCEQ Revision 06/2020



## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

#### B. Testing Requirements

1. Sewage sludge or biosolids shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

- a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B biosolids

criteria.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a

single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.

ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.

#### 4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Biosolids shall be injected below the surface of the land.
  - ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test - annually  
 PCBs - annually

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.



**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE OR BIOSOLIDS FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

**D. Notification Requirements**

1. If bulk is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk biosolids will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

**E. Record Keeping Requirements**

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a

period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
  - c. The number of acres in each site on which bulk biosolids are applied.
  - d. The date and time biosolids are applied to each site.
  - e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
  - f. The total amount of biosolids applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **F. Reporting Requirements**

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk biosolids are applied.
  - c. The date and time bulk biosolids are applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
  - e. The amount of biosolids (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record Keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

##### **A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

##### **B. Record Keeping Requirements**

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge or biosolids transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.



### **C. Reporting Requirements**

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

**OTHER REQUIREMENTS**

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category B facility must be operated by a chief operator or an operator holding a Class B license or higher for Interim I and II phases. This Category B facility must be operated by a chief operator or an operator holding a Class A license or higher for Interim III and Final phases. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. There is no mixing zone established for this discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.
4. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. The permittee shall conduct instream monitoring. Within 180 days of permit issuance, the permittee shall submit an instream monitoring work plan to the TCEQ Compliance Monitoring Team (MC-224) and cc the Standards Implementation Team (MC-150). The TCEQ may disapprove or modify the work plan within 60 days of receipt, with no response being equivalent to approval. The instream monitoring shall be conducted to collect representative values of sulfate. Monitoring shall occur at one sampling station in the cove of the Doe Creek arm of Lewisville Lake, and at one sampling location in a nearby cove. The monitoring locations should be outside of any mixing zone, or influence of the effluent. Monitoring shall be done at a minimum frequency of once per month and include at least 30 samples for sulfate from each location. Samples should be taken at regular intervals to ensure data is obtained throughout the year and includes all seasons. To the extent possible, the data should reflect baseline flow conditions. Data collection and analytical methods shall conform to guidelines set forth in the Surface Water Quality Monitoring Procedures, Volume 1 (RG-415, revised August 2012). The duration of the study shall be three years from the date of implementation and annual progress reports shall be submitted by December 31st of each year to the TCEQ Compliance Monitoring Team (MC-224) and the Standards Implementation Team (MC150).
7. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its

compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, daily may be reduced to 5/week in the Interim I, II, III, and Final phase. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary, to protect human health or the environment.

8. The plans and specifications for the Interim I phase has been reviewed and approved by the Texas Commission on Environmental Quality (TCEQ) on August 14, 2019 (TCEQ log no. 0810/031)
9. Prior to construction of the Interim II, III, and Final phases of treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications, and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the effluent limitations required on Pages 2a, 2b and 2c of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.
10. The permittee shall notify the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five (45) days prior to the completion of the Interim II, III, and Final phases on Notification of Completion Form 20007.

**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007

**BIOMONITORING REQUIREMENTS****CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER**

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

**1. Scope, Frequency, and Methodology**

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. The permittee shall conduct the following toxicity tests using the test organisms, procedures and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
  - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 27%, 35%, 47%, 63%, and 100% effluent. The critical dilution, defined as 63% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction
  - 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing

and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

## 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
  - 1) a control mean survival of 80% or greater;
  - 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
  - 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
  - 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
  - 5) a critical dilution CV% of 40 or less for young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test, unless statistically significant toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid;
  - 6) a percent minimum significant difference of 47 or less for water flea reproduction, unless statistically significant sublethal toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid; and
  - 7) a PMSD of 30 or less for fathead minnow growth, unless statistically significant sublethal toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid.
- b. Statistical Interpretation
  - 1) For the water flea survival and reproduction test, the statistical analyses used to determine the inhibition concentration of effluent that would cause a 25% reduction (IC<sub>25</sub>) in survival or mean young per female shall be as described in the methods manual referenced in Part 1.b.
  - 2) For the fathead minnow larval survival and growth tests, the statistical

analyses used to determine the IC<sub>25</sub> in survival or growth shall be as described in the methods manual referenced in Part 1.b.

- 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 4) Most point estimates are derived from a mathematical model that assumes a continuous dose-response relationship. For any test result that demonstrates a non-continuous (threshold) response, or a non-monotonic dose-response relationship, the IC<sub>25</sub> should be determined based on the method guidance manual referenced in Item 3.
- 5) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic dose-response relationship may be submitted, prior to the due date, for technical review of test validity and acceptability. The method guidance manual referenced in Item 3 will be used as the basis, along with best professional judgement, for making a determination of test validity and acceptability.

c. Dilution Water

- 1) Dilution water used in the toxicity tests must be the receiving water collected as close as possible to the point of discharge into the lake but unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
  - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days); and
  - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

- 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
- 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
- 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.
- 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
  - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
  - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted



during the previous calendar quarter.

- 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
- 1) For the water flea, Parameter T4P3B, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the water flea, Parameter T6P3B, report the IC25 for survival.
  - 3) For the water flea, Parameter T5P3B, enter a "1" if the IC25 for reproduction is less than the critical dilution; otherwise, enter a "0."
  - 4) For the water flea, Parameter T7P3B, report the IC25 for reproduction.
  - 5) For the fathead minnow, Parameter T4P6C, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 6) For the fathead minnow, Parameter T6P6C, report the IC25 for survival.
  - 7) For the fathead minnow, Parameter T5P6C, enter a "1" if the IC25 for growth is less than the critical dilution; otherwise, enter a "0."
  - 8) For the fathead minnow, Parameter T7P6C, report the IC25 for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For retest number 2, Parameter 22416, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."

#### 4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. Significant lethality and significant effect were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any test that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and

one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
  - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for

Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/080) and “Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

- 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation which identifies the pollutant(s) and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility’s effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

- 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates persistent significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.
- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	27%	35%	47%	63%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						

\*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	27%	35%	47%	63%	100%
24h						
48h						
End of Test						

1. Is the IC<sub>25</sub> for reproduction less than the critical dilution (63%)? \_\_\_\_\_ YES  
 \_\_\_\_\_ NO

2. Is the IC<sub>25</sub> for survival less than the critical dilution (63%)? \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each IC<sub>25</sub> below:

IC<sub>25</sub> reproduction = \_\_\_\_\_%

IC<sub>25</sub> survival = \_\_\_\_\_%

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
27%							
35%							
47%							
63%							
100%							

\* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)  
 BIOMONITORING REPORTING  
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
27%									
35%									
47%									
63%									
100%									

\* Coefficient of Variation = standard deviation x 100/mean

1. Is the IC25 for growth less than the critical dilution (63%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
2. Is the IC25 for survival less than the critical dilution (63%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
3. Enter percent effluent corresponding to each IC25 below:  
 IC25 growth = \_\_\_\_\_%  
 IC25 survival = \_\_\_\_\_%



24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,” fifth edition (EPA-821-R-02-012) or its most recent update:
  - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
  - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in Part 1.a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency.

2. Required Toxicity Testing Conditions

- a. Test Acceptance – The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

2. Required Toxicity Testing Conditions

- a. Test Acceptance – The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- c. Samples and Composites
  - 1) The permittee shall collect one composite sample from Outfall 001.
  - 2) The permittee shall collect the composite samples such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
  - 5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
  - 1) Semiannual biomonitoring test results are due on or before July 20th and

January 20th for biomonitoring conducted during the previous 6-month period.

- 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
- 1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For retest number 2, Parameter 22416, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

#### 4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for

review, a sampling and analytical schedule, and a proposed TRE initiation date.

- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
- 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee

shall implement the TRE.

- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
  - 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates persistent significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with

an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report will also specify a corrective action schedule for implementing the selected control mechanism.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent

TABLE 2 (SHEET 2 OF 2)  
 FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent



# **Exhibit B**



TPDES PERMIT NO.  
WQ0014323001  
*[For TCEQ office use only - EPA I.D.  
No. TX0124745]*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

This major amendment supersedes and  
replaces TPDES Permit No.  
WQ0014323001 issued on December  
27, 2016.

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

Upper Trinity Regional Water District

whose mailing address is

P.O. Box 305  
Lewisville, Texas 75067

is authorized to treat and discharge wastes from the Peninsula Regional Water Reclamation  
Plant, SIC Code 4952

located at 1130 Naylor Road, in Denton County, Texas 76227

to Cantrell Slough; thence to Lewisville Lake in Segment No. 0823 of the Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth  
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),  
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does  
not grant to the permittee the right to use private or public property for conveyance of  
wastewater along the discharge route described in this permit. This includes, but is not limited  
to, property belonging to any individual, partnership, corporation, or other entity. Neither does  
this permit authorize any invasion of personal rights nor any violation of federal, state, or local  
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be  
necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE: March 24, 2022

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For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 2.0 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.94 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 2,611 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (39)	10	20	30	One/week	Composite
Total Suspended Solids	12 (94)	20	40	60	One/week	Composite
Ammonia Nitrogen	2 (16)	5	10	15	One/week	Composite
Total Phosphorus	1 (7.8)	2	4	6	One/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 5.0 mg/l and shall be monitored once per week by grab sample.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 2.0 million gallons per day (MGD) facility and lasting through the completion of expansion to the 3.1 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 2.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 5,556 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (83)	10	20	30	Two/week	Composite
Total Suspended Solids	12 (200)	20	40	60	Two/week	Composite
Ammonia Nitrogen	2 (33)	5	10	15	Two/week	Composite
Total Phosphorus	1 (17)	2	4	6	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 5.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

INTERIM III EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 3.1 million gallons per day (MGD) facility and lasting through the completion of expansion to the 4.6 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 3.1 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 8,611 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (129)	10	20	30	Two/week	Composite
Total Suspended Solids	12 (310)	20	40	60	Two/week	Composite
Ammonia Nitrogen	2 (52)	5	10	15	Two/week	Composite
Total Phosphorus	1 (26)	2	4	6	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 4.6 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 4.6 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 12,778 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (192)	10	20	30	Two/week	Composite
Total Suspended Solids	12 (460)	20	40	60	Two/week	Composite
Ammonia Nitrogen	2 (77)	5	10	15	Two/week	Composite
Total Phosphorus	1 (38)	2	4	6	Two/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

## DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

### 1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

### 2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).



- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Compliance Monitoring Team of the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Compliance

Monitoring Team of the Enforcement Division (MC 224).

#### 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Compliance Monitoring Team of the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions

established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or



- iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee and the permit number(s);
  - ii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iii. the date of filing of the petition.

## **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC §

7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

- a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the

Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
  - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel,

appurtenance, or other improvement on land used to manage industrial solid waste.

- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
  - i. Volume of waste and date(s) generated from treatment process;
  - ii. Volume of waste disposed of on-site or shipped off-site;
  - iii. Date(s) of disposal;
  - iv. Identity of hauler or transporter;
  - v. Location of disposal site; and
  - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

#### B. Testing Requirements

1. Sewage sludge or biosolids shall be tested once during the term of this permit in the Interim I phase; annually in the Interim II, III and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC

Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

- a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC §

312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.

- d. Three alternatives are available to demonstrate compliance with Class B biosolids criteria.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.



- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.
  - viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.
  - ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.
4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are

defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

- i. Biosolids shall be injected below the surface of the land.
- ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
- iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10-

- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
- ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test	- once during the term of this permit in the Interim I phase; annually in the Interim II, III and Final phases
PCBs	- once during the term of this permit in the Interim I phase; annually in the Interim II, III and Final phases

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE OR BIOSOLIDS FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

**D. Notification Requirements**

1. If bulk is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk biosolids will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

**E. Record Keeping Requirements**

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a

period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
  - c. The number of acres in each site on which bulk biosolids are applied.
  - d. The date and time biosolids are applied to each site.
  - e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
  - f. The total amount of biosolids applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **F. Reporting Requirements**

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.



16. Amount of sludge or biosolids transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk biosolids are applied.
  - c. The date and time bulk biosolids are applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
  - e. The amount of biosolids (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested once during the term of this permit in the Interim I phase; annually in the Interim II, III and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record Keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

**A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

**B. Record Keeping Requirements**

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge or biosolids transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

### **C. Reporting Requirements**

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. Effective December 21, 2025, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

**OTHER REQUIREMENTS**

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category C facility in the Interim I phase must be operated by a chief operator or an operator holding a Class C license or higher. This Category B facility in the Interim II, III and Final phases must be operated by a chief operator or an operator holding a Class B license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. There is no mixing zone established for this discharge to an intermittent stream with perennial pools. Chronic toxic criteria apply at the point of discharge.
4. The permittee submitted evidence of legal restrictions (on file) prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC § 309.13(e)(3). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment A.)
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, daily may be reduced to 5/week for all phases. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.
7. Prior to construction of the 3.1 MGD and 4.6 MGD wastewater treatment facilities, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary

transmittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications, and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the effluent limitations required on Page 2b and 2c of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

Plans and specifications have been approved for the 2.0 MGD wastewater treatment facility, in accordance with 30 TAC § 217, Design Criteria for Domestic Wastewater Systems. A summary transmittal approval letter was issued on February 25, 2021 (Log No. 0121/068). A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

8. The permittee shall notify the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five days prior to the completion of the new facilities on Notification of Completion Form 20007.
9. There is an EPA-approved WER of 6.43 used to calculate the total copper effluent criteria for this facility.

**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007



**BIOMONITORING REQUIREMENTS****CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER**

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

**1. Scope, Frequency, and Methodology**

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. Within 90 days of initial discharge of the 2.0 MGD facility, the permittee shall conduct the following toxicity tests using the test organisms, procedures and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
  - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction
  - 1) If none of the first four consecutive quarterly tests demonstrates

significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

## 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
  - 1) a control mean survival of 80% or greater;
  - 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
  - 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
  - 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
  - 5) a critical dilution CV% of 40 or less for young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test, unless statistically significant toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid;
  - 6) a percent minimum significant difference of 47 or less for water flea reproduction, unless statistically significant sublethal toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid; and
  - 7) a PMSD of 30 or less for fathead minnow growth, unless statistically significant sublethal toxicity is demonstrated at the critical dilution, in which case the test shall be considered valid.
- b. Statistical Interpretation
  - 1) For the water flea survival and reproduction test, the statistical analyses used to determine the inhibition concentration of effluent that would cause a 25% reduction (IC25) in survival or mean young per female shall be as described in the methods manual referenced in Part 1.b.
  - 2) For the fathead minnow larval survival and growth tests, the statistical

analyses used to determine the IC<sub>25</sub> in survival or growth shall be as described in the methods manual referenced in Part 1.b.

- 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 4) Most point estimates are derived from a mathematical model that assumes a continuous dose-response relationship. For any test result that demonstrates a non-continuous (threshold) response, or a non-monotonic dose-response relationship, the IC<sub>25</sub> should be determined based on the method guidance manual referenced in Item 3.
- 5) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic dose-response relationship may be submitted, prior to the due date, for technical review of test validity and acceptability. The method guidance manual referenced in Item 3 will be used as the basis, along with best professional judgement, for making a determination of test validity and acceptability.

c. Dilution Water

- 1) Dilution water used in the toxicity tests shall be the receiving water collected at a point upstream of the discharge as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:
  - a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or
  - b) use the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
  - b) the test indicating receiving water toxicity was carried out to

completion (i.e., 7 days);

- c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.
- d. Samples and Composites
  - 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
  - 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.
  - 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the

Table 1 forms provided with this permit.

- 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
  - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
  - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
- 1) For the water flea, Parameter T4P3B, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the water flea, Parameter T6P3B, report the IC25 for survival.
  - 3) For the water flea, Parameter T5P3B, enter a "1" if the IC25 for reproduction is less than the critical dilution; otherwise, enter a "0."
  - 4) For the water flea, Parameter T7P3B, report the IC25 for reproduction.
  - 5) For the fathead minnow, Parameter T4P6C, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 6) For the fathead minnow, Parameter T6P6C, report the IC25 for survival.
  - 7) For the fathead minnow, Parameter T5P6C, enter a "1" if the IC25 for growth is less than the critical dilution; otherwise, enter a "0."
  - 8) For the fathead minnow, Parameter T7P6C, report the IC25 for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For retest number 2, Parameter 22416, enter a "1" if the IC25 for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. A significant effect is defined as an IC25 of a specified endpoint (survival, growth, or reproduction) less than the critical dilution. Significant lethality is

defined as a survival IC25 less than the critical dilution. Similarly, significant sublethality is defined as a growth or reproduction IC25 less than the critical dilution.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

## 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

- 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and

- confirmation tests performed during the quarter;
- 3) any data and substantiating documentation which identifies the pollutant(s) and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific



control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.

- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						

\*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

1. Is the IC<sub>25</sub> for reproduction less than the critical dilution (100%)? \_\_\_\_\_ YES  
 \_\_\_\_\_ NO

2. Is the IC<sub>25</sub> for survival less than the critical dilution (100%)? \_\_\_\_\_ YES \_\_\_\_\_  
 NO

3. Enter percent effluent corresponding to each IC<sub>25</sub> below:

IC<sub>25</sub> survival = \_\_\_\_\_% effluent

IC<sub>25</sub> reproduction = \_\_\_\_\_% effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times  
Composites  
Collected

No. 1 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ TO: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							

\* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)  
 BIOMONITORING REPORTING  
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

\* Coefficient of Variation = standard deviation x 100/mean

1. Is the IC25 for growth less than the critical dilution (100%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
  
2. Is the IC25 for survival less than the critical dilution (100%)? \_\_\_\_\_ YES \_\_\_\_\_ NO
  
3. Enter percent effluent corresponding to each IC25 below:  
 IC25 survival = \_\_\_\_\_% effluent  
 IC25 growth = \_\_\_\_\_% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. Within 90 days of initial discharge of the 2.0 MGD facility, the toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,” fifth edition (EPA-821-R-02-012) or its most recent update:
  - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
  - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in item b.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
  - 1) The permittee shall collect one composite sample from Outfall 001.
  - 2) The permittee shall collect the composite samples such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
  - 5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
  - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20<sup>th</sup> for biomonitoring conducted during the previous 6-month period.
  - 2) Quarterly biomonitoring test results are due on or before April 20th, July

20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.

- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
- d. Enter the following codes for retests only:
  - 1) For retest number 1, Parameter 22415, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”
  - 2) For retest number 2, Parameter 22416, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter “1.”

#### 4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall



specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

- 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
  - d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before

April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.
- This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.
- The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.
- g. The permittee shall complete the TRE and submit a final report on the TRE

activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report will also specify a corrective action schedule for implementing the selected control mechanism.

- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent

TABLE 2 (SHEET 2 OF 2)  
FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent



# **Exhibit C**



TPDES PERMIT NO.  
WQ0013647001  
[For TCEQ office use only - EPA I.D.  
No. TX0056588]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

This is a renewal that replaces TPDES  
Permit No. WQ0013647001 issued on  
November 30, 2016.

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

City of Aubrey

whose mailing address is

107 South Main Street  
Aubrey, Texas 76227

is authorized to treat and discharge wastes from the City of Aubrey Wastewater Treatment Facility, SIC  
Code 4952

located 514 Bluebonnet Street, Aubrey, in Denton County, Texas 76227

to Aubrey Branch, thence to Elm Fork Trinity River Below Ray Roberts Lake in Segment No. 0839 of  
the Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this  
permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the  
State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the  
permittee the right to use private or public property for conveyance of wastewater along the discharge  
route described in this permit. This includes, but is not limited to, property belonging to any individual,  
partnership, corporation or other entity. Neither does this permit authorize any invasion of personal  
rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the  
permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE:  
August 16, 2021

  
\_\_\_\_\_  
For the Commission



INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 0.55 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.40 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 974 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Max. Single Grab Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Five/week	Instantaneous
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (33)	15	25	35	One/week	Grab
Total Suspended Solids	15 (50)	25	40	60	One/week	Grab
Ammonia Nitrogen	3 (10)	6	10	15	One/week	Grab
<i>E. coli</i> colony-forming units or most probable number per 100 ml	126	N/A	N/A	399	One/month	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l and shall not exceed a chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week by grab sample. In the oxidation ditch treatment train the detention time requirement shall be met by adding the detention times in the chlorine contact chamber used plus any additional detention time at the flow-metering basin. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 0.55 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.55 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 1,146 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (46)	15	25	35	One/week	Composite
Total Suspended Solids	15 (69)	25	40	60	One/week	Composite
Ammonia Nitrogen	3 (14)	6	10	15	One/week	Composite
<i>E. coli</i> colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Two/month	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l and shall not exceed a chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored daily by grab sample. In the oxidation ditch treatment train the detention time requirement shall be met by adding the detention times in the chlorine contact chamber used plus any additional detention time at the flow-metering basin. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.

## DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

### 1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

### 2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Compliance Monitoring Team of the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Compliance

Monitoring Team of the Enforcement Division (MC 224).

#### 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2023, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Compliance Monitoring Team of the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.



**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance

with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the

regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
  - iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.

- b. This notification must indicate:
  - i. the name of the permittee and the permit number(s);
  - ii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iv. the date of filing of the petition.

### **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).

## 7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
- a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and

disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 221) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
  - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
  - i. Volume of waste and date(s) generated from treatment process;
  - ii. Volume of waste disposed of on-site or shipped off-site;
  - iii. Date(s) of disposal;
  - iv. Identity of hauler or transporter;
  - v. Location of disposal site; and
  - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge or biosolids only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

#### B. Testing Requirements

1. Sewage sludge or biosolids shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

- a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B biosolids

criteria.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a

single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.
  - ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.
4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Biosolids shall be injected below the surface of the land.
  - ii. No significant amount of the biosolids shall be present on the land surface within one hour after biosolids are injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

- Toxicity Characteristic Leaching Procedure (TCLP) Test - once during the term of this permit
- PCBs - once during the term of this permit

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.



**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B BIOSOLIDS PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

### **C. Management Practices**

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk biosolids enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A biosolids requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

### **D. Notification Requirements**

1. If bulk biosolids are applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk biosolids will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

### **E. Record keeping Requirements**

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period

of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
  - c. The number of acres in each site on which bulk biosolids are applied.
  - d. The date and time biosolids are applied to each site.

- e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
- f. The total amount of biosolids applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

## **F. Reporting Requirements**

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.

14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.
16. Amount of sludge or biosolids transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk biosolids are applied.
  - c. The date and time bulk biosolids are applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
  - e. The amount of biosolids (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge or biosolids meets the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge or biosolids and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

**A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

**B. Record Keeping Requirements**

1. For sludge or biosolids transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge or biosolids transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.



### **C. Reporting Requirements**

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. Effective December 21, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

**OTHER REQUIREMENTS**

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category C facility must be operated by a chief operator or an operator holding a Class C license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by a combination of ownership of the required buffer zone area and the submission of a nuisance odor plan approved June 9, 2016 (log no. 0306/097) for the smaller screening unit and the eastern end of the oxidation ditch, the permittee shall comply with the requirements of 30 TAC § 309.13(e). (See Attachment A.)
4. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
5. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, 1/month may be reduced to 1/quarter in the Interim phase and 2/month may be reduced to 1/month in the Final phase. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.
6. The permittee shall notify the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division in writing at least forty-five (45) days prior to the completion of the Final phase facilities on Notification of Completion Form 20007.

7. The plans and specifications of the 0.55 MGD WWTP was approved by TCEQ on June 9, 2016. (Log No. 0316/097).

**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand or BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007



WQ0013647001  
'Attachment A'

# **Exhibit D**



# RESOLUTION

## RESOLUTION # 2017- 17

**A RESOLUTION OF THE BOARD OF DIRECTORS OF UPPER TRINITY REGIONAL WATER DISTRICT AUTHORIZING THE FILING AND PROSECUTION OF AN APPLICATION TO AMEND WATER USE PERMIT 5778 WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.**

**WHEREAS**, the District holds Water Use Permit No. 5778 (the "Permit"), which includes, among other things, the authorization to reuse the lesser of (1) not to exceed 9,664 acre-feet of Chapman Lake-derived return flows per year, or (2) an amount of Chapman Lake-derived return flows actually discharged less conveyance losses; and

**WHEREAS**, return flows derived from Chapman Lake discharged from wastewater treatment plants of the District and its Members and Customers pass through Lewisville Lake before diversion and use by the District; and

**WHEREAS**, the wastewater treatment plants (the "WWTPs") that are identified in the Permit discharge return flows into or upstream of Lewisville Lake; and

**WHEREAS**, the Permit specifies the discharge points and rates of the associated return flows; and

**WHEREAS**, a Member or Customer of the District that receives water that originated in Chapman Lake has recently received a permit for a new WWTP that will discharge its return flows into or upstream of Lewisville Lake; and

**WHEREAS**, the Board of Directors of the District deems it to be appropriate and in the best interest of the District to add this additional discharge point to those points now specified in the Permit; and

**WHEREAS**, Chapter 11 of the Texas Water Code (the "TWC") requires authorization from the Texas Commission on Environmental Quality (the "Commission") to add such points of discharge to the Permit; and

**WHEREAS**, to comply with the requirements of the TWC, the District must file and prosecute an application to amend the Permit (the "Application") with the Commission, which Application must include proof of authorization to execute said Application on behalf of the District; and

**WHEREAS**, the District now desires to file an Application, and authorize its Executive Director, on behalf of the District, to prepare and execute such Application to amend the Permit to add additional discharge points; and



**WHEREAS**, the Executive Director recommends that said application be filed with the Commission with due diligence.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT:**

**SECTION 1.** That the Board of Directors does hereby authorize the filing and prosecution of an application with the Commission to amend Water Use Permit 5778.

**SECTION 2.** That the Executive Director is hereby directed to file said Application on behalf of the District, to appear and arrange for the appearance of persons representing the District at any proceedings on said Application before the Commission, and to direct the prosecution, compromise and settlement on behalf of the District.

**SECTION 3.** That this Resolution shall become effective immediately upon its passage.

**DULY PASSED AND APPROVED THIS 3<sup>RD</sup> DAY OF AUGUST 2017.**

Recommended: Thomas E. Taylor  
Thomas E. Taylor, Executive Director

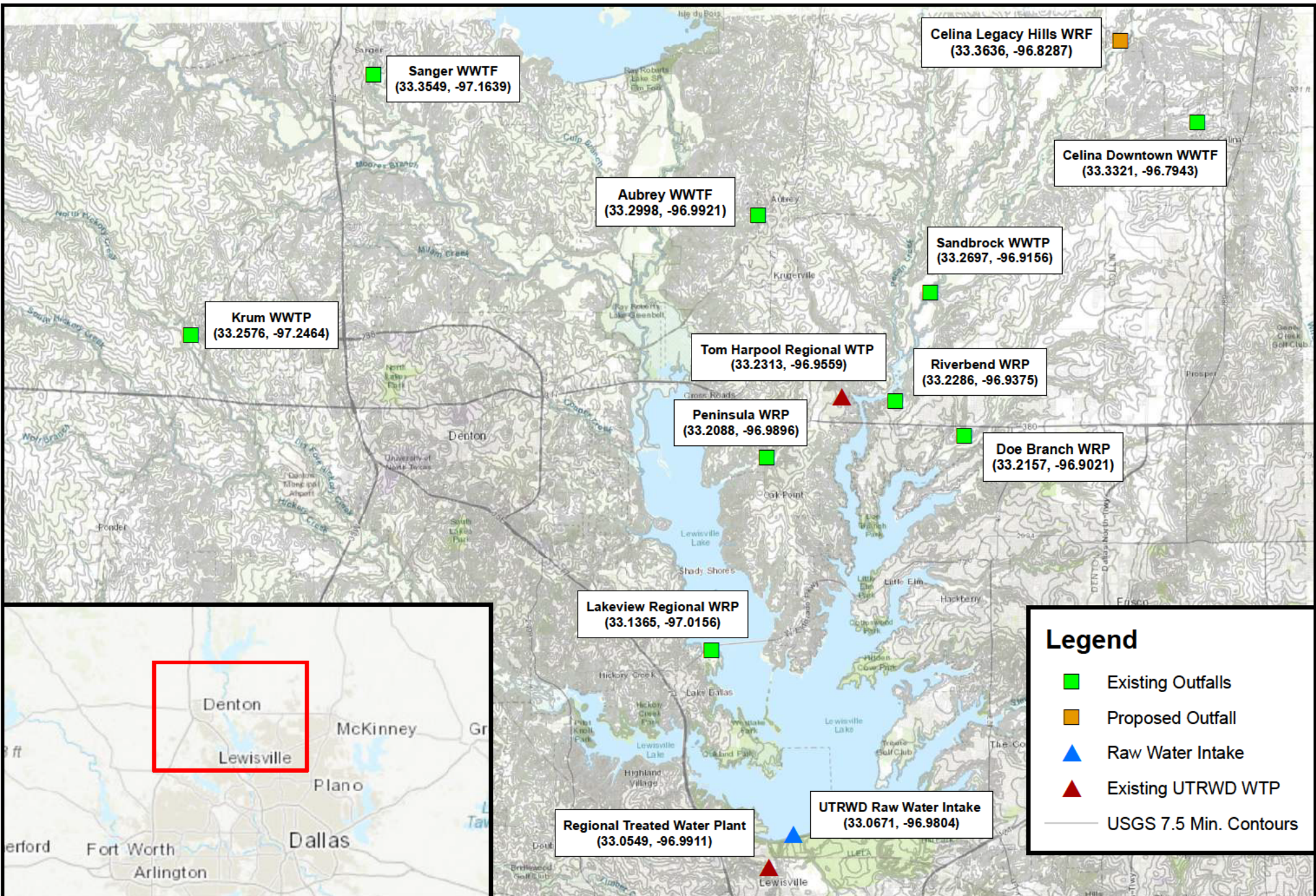
Executed: Kevin Mercer  
Kevin Mercer, President

Attest: Mike Fairfield  
Mike Fairfield, Secretary



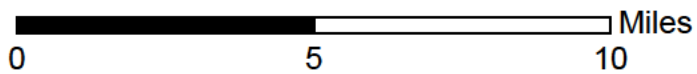


# **Exhibit E**



**General Location Map - Amendment to CA 5778**

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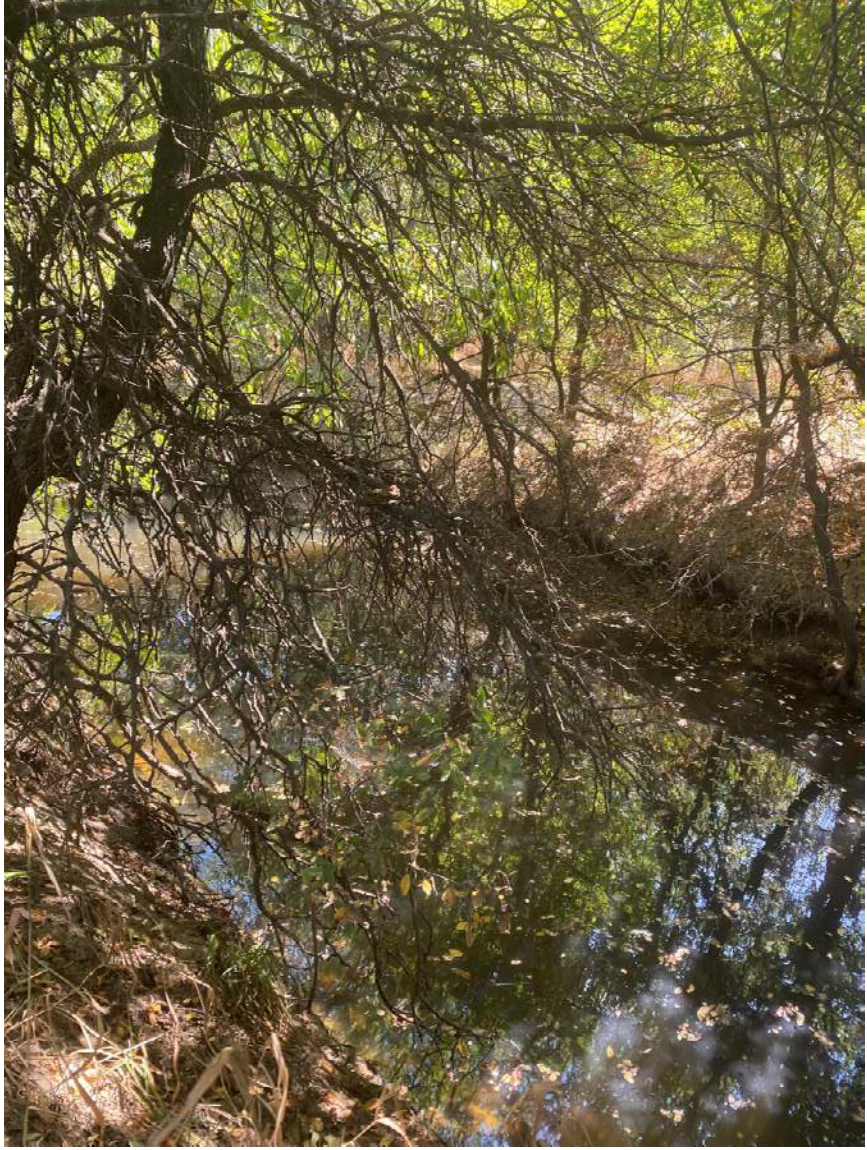


# **Exhibit F**









# **Exhibit H**



UPPER TRINITY REGIONAL  
WATER DISTRICT

Water Conservation Plan

Updated May 1, 2019



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**UPPER TRINITY REGIONAL WATER DISTRICT**  
**Water Conservation Plan**  
*May 2019*

**SECTION 1**

**Introduction**

Water supply is a key issue in the growth and development of communities in Texas. In recent years, the growing population and economic development of North Central Texas has led to increasing demands for water. Additional supplies to meet these demands will be both expensive and difficult to develop. Therefore, it is important that we make the most efficient use of existing supplies - - to prolong the need to develop new sources of supply.

Effective water conservation can prolong the need for development of new water supplies, minimize the associated environmental impacts, and reduce the high cost of water supply development. Even with robust conservation measures, new sources of water will be needed; conservation and reuse alone are not enough. Therefore, to respond to the growing population of this region, the planning for new water resources must continue. Upper Trinity Regional Water District ("Upper Trinity") considers water conservation (including reuse of reclaimed wastewater) an integral part of this planning and water supply development process.

Upper Trinity was created in 1989 by the Texas Legislature to provide treated water service on a wholesale basis to towns, cities, and other water utility providers. Currently, Upper Trinity provides wholesale treated water service to eighteen members and customers (serving twenty-four communities) in Denton and Collin Counties (herein "Customers").

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality ("TCEQ") has promulgated guidelines and requirements governing the development of water conservation plans for Wholesale Public Water Suppliers. Upper Trinity developed its original plans for Water Conservation and for Drought Contingency in May 1993, later amended in March 2005, April 2009 and September 2012. This update of the Water Conservation Plan (the "Plan") has been coordinated with the suggested model water conservation plan prepared by Upper Trinity for Customers offering retail service; and, is consistent with the latest TCEQ requirements outlined below. This Plan also incorporates water conservation practices and strategies recommended by the Water Conservation Advisory Council ("Advisory Council"). The Advisory Council was created by the Texas Legislature in 2007 to foster basic and enhanced water conservation measures and practices for Wholesale Public Water Suppliers like Upper Trinity. Upper Trinity will continue to evaluate, and implement as appropriate, new or updated strategies adopted by the Advisory Council.

**Objectives**

Water is a basic tenant in all aspects of sustainability. Water conservation is one critical element of a utility's effort to meet future water supply needs, in an economical manner and without sacrificing quality of life standards. The following are the central objectives of this Plan:

- Provide support to communities to maintain and continue sound conservation practices;
- Reduce water consumption from levels that would otherwise prevail without conservation efforts;

- Reduce the loss and waste of water, as evidenced by per capita water use;
- Continue to improve efficiency in the use of water;
- Encourage greater reuse of reclaimed wastewater in helping to sustain an adequate supply; and
- Extend the adequacy of current water supplies by reducing peak and total demand for water.

In an effort to meet each of the above central objectives, Upper Trinity will provide leadership and technical assistance to its Customers in order to maximize water savings and water efficiency within its service area. Upper Trinity has a designated Conservation Coordinator to lead its regional water conservation program and to assist its Customers with implementation of their respective conservation strategies. Similarly, to coordinate and communicate consistent conservation strategies, Upper Trinity has created a work group within the Customer Advisory Council for the Regional Treated Water System to focus on water conservation matters. Upper Trinity also encourages each Customer to designate a staff member as its Conservation Coordinator with the responsibility for implementing and reporting on its water conservation program. Retail utilities with 3,300 or more connections are required to designate a Conservation Coordinator according to the Texas Water Code Sec. 13.146.

### **1.1 Texas Commission on Environmental Quality Rules**

TCEQ rules governing the development of water conservation plans for Wholesale Public Water Suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, and Rule 288.5 of the Texas Administrative Code. Copies of these rules are included in Appendix A. The rules define a water conservation plan as:

“A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water.”

#### **A. Basic Water Conservation Plan Requirements**

TCEQ requires that water conservation plans for Wholesale Public Water Suppliers, like Upper Trinity, include the following components:

- *Utility Profile:* Information regarding population and customer data, water use data, water supply system data, and wastewater system data. (Section 2)
- *Goals:* Specific quantified five-year and ten-year targets for water savings to include goals for water loss programs, in gallons per capita per day (GPCD). (Section 3)
- *Accurate Metering Devices:* TCEQ requires that metering devices have an accuracy of plus or minus five percent (5%) for measuring water diverted from the supply source. (Section 4.1)
- *Record Management System:* A system to record water delivered, water sold, and water lost. (Section 4.2)
- *Program for Leak Detection & Repair, and Water Loss Accounting:* A program to detect

and repair leaks, and water loss accounting for the water storage, delivery, and distribution system. (Section 4.3)

- *Wholesale Customer Requirements:* A requirement that every water supply contract entered into or renewed after official adoption of the water conservation plan, including any contract extension, include a provision that each successive wholesale customer develop and implement a water conservation plan with similar water conservation strategies to this Plan, including applicable elements of Title 30 TAC Chapter 288. (Section 4.4)
- *Reservoir Systems Operational Plan:* A requirement to provide a coordinated operational structure for operation of reservoirs owned by the water supply entity within a common watershed or river basin in order to optimize available water supplies. (Section 4.5)
- *Coordination with Regional Water Planning Group:* Document that the Plan has been coordinated with the Regional Water Planning Group to ensure consistency with the appropriate approved regional water plan. (Section 4.6)
- *Means of Implementation and Enforcement:* A strategy for implementing and enforcing the provisions of this Plan, as evidenced by an ordinance, resolution, or tariff, and a description of the authority by which the Plan is enforced. (Section 6)

#### B. Enhanced Water Conservation Strategies

TCEQ rules require that wholesale water suppliers select necessary additional conservation strategies, including any water conservation practices the wholesale water supplier shows to be appropriate for achieving its water conservation goals. Upper Trinity will also incorporate the following additional conservation strategies, as needed, to achieve the conservation goals stated in this Plan:

- *Program for Reuse and/or Recycling:* Upper Trinity has implemented a program of reclaiming and recycling treated wastewater effluent in order to further the efficient use of water. (Section 5.2)
- *Public Education Program:* Upper Trinity has implemented public education and outreach programs that include an informative school program, a literature program, special events and promotions program, a website and social media dedicated to water conservation, a public awareness program, and it provides speakers to various groups on conservation while coordinating with other North Texas water suppliers and Customers to promote water conservation. (Section 5.3)
- *Water Conserving Landscaping:* As part of its public education activities, Upper Trinity has implemented and fostered programs to support the conservative use of water in landscape by its Customers and their retail customers. (Section 5.4)
- *Landscape Water Management:* A strategy for implementing and achieving the efficient use and stewardship of water in landscape irrigation, including watering a maximum of two times per week and time-of-day watering provisions. (Section 5.5)
- *Enhanced Contract Language:* Upper Trinity will implement additional language in future contracts to continue to improve conservation and the efficient use of water. (Section 5.8)

- *Irrigation System Evaluations / Technical Assistance:* A program to provide irrigation system evaluations and technical assistance to Customers and their retail customers (residential, industrial, commercial, and institutional), if requested, regarding efficient and effective landscape watering practices. (Section 5.9)
- *ICI Program:* A facilities and processes audit program that will assist Customers and their retail industrial, commercial, and institutional (“ICI”) customers with audits of their facilities to explore the development of economical and practical water efficiency measures that will contribute to increased water conservation in their processes. (Section 5.10)

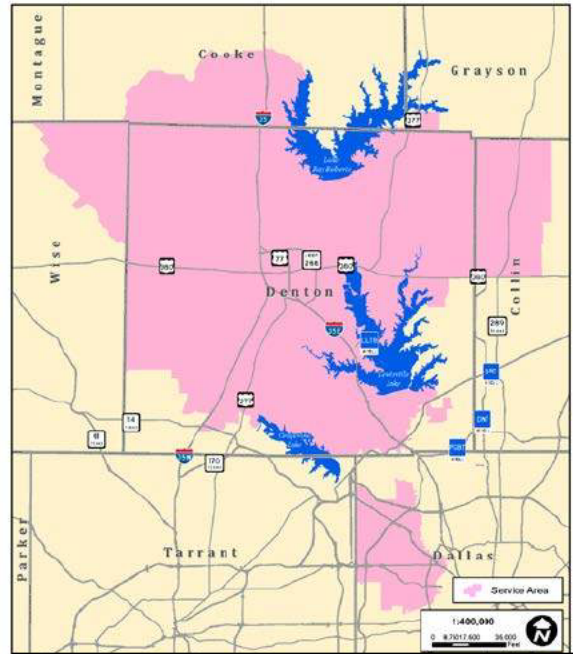
*Other Strategies:* Upper Trinity has developed model water conservation and drought contingency plans for use by its Customers (Section 5.15). In addition, Upper Trinity has a dedicated staff to lead its regional water conservation program and to assist Customers with implementation of their respective conservation strategies; and, has created a work group within Upper Trinity’s Customer Advisory Council. The Water Conservation Work Group meets regularly to coordinate and communicate consistent conservation strategies and to discuss other conservation related matters (Section 5.16). Upper Trinity will continue to encourage its Customer to incorporate applicable plumbing code standards for water-conserving fixtures (Section 5.1). Other strategies employed by Upper Trinity include pressure controls to maintain System integrity to avoid the loss of water (Section 5.5), watershed protection measures (Section 5.6), and establishing a means for measuring success in water conservation (Section 5.11).

Upper Trinity will continue to evaluate and implement water conservation strategies and practices that will further the conservation of its water supplies. This Plan sets forth a program of long-term strategies under which Upper Trinity can maintain and continue existing conservation results, plus improve the overall efficiency of water use and conserve its water resources. Shorter-term strategies that address specific water management conditions (i.e., periods of drought, unusually high water demands, unforeseen equipment or system failure, or contamination of water supply sources) are provided in Upper Trinity’s Drought Contingency Plan.

## SECTION 2

### Water Utility Profile

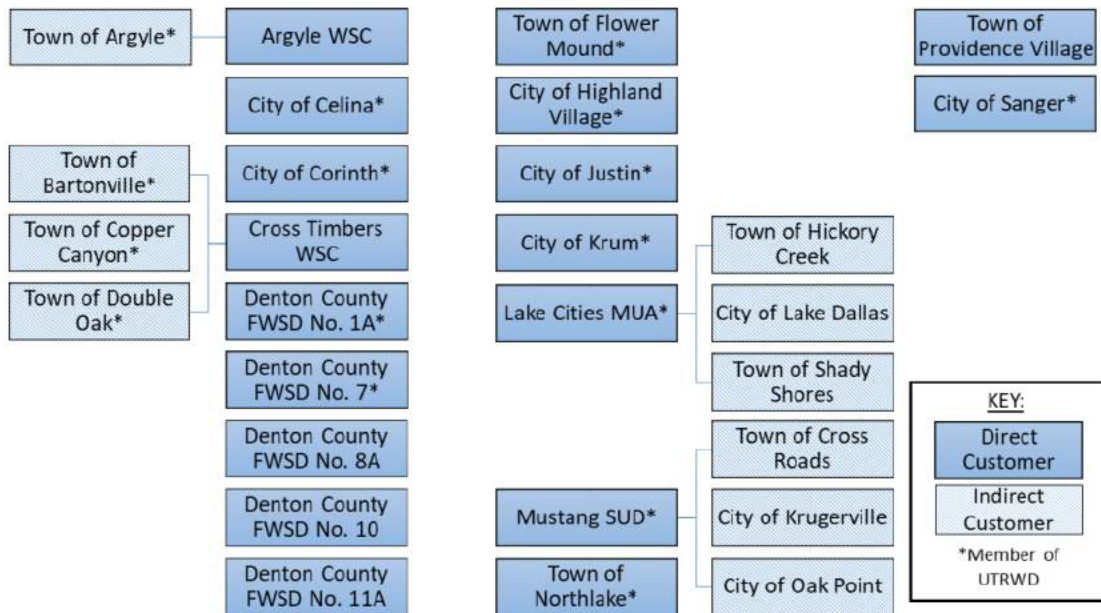
Upper Trinity’s Regional Treated Water System (“System”) provides services to its wholesale Customers through two water treatment plants (Thomas E. Taylor Water Treatment Plant in Lewisville, and the Tom Harpool Water Treatment Plant in Providence Village), and a system of pipelines and pump stations that deliver water to each Customer at specified points of delivery. The System does not include facilities “downstream” of such points of delivery (i.e., internal, retail distribution system). Upper Trinity currently obtains its raw water from Lewisville Lake, Ray Roberts Lake, Jim Chapman Lake and from the reuse of water imported from Jim Chapman Lake. A dependable supply of water from these sources is confirmed and enabled by various contractual agreements between Upper Trinity and the respective water rights holders.



**Figure 2.1**  
Map of Planning & Service Area

Upper Trinity’s service area, as established by the Region C Water Planning Group, includes all communities currently served plus additional portions of Denton, Grayson, Wise and Cooke counties. See Figure 2.1 for a map of Upper Trinity’s service area.

**Figure 2.2**  
Upper Trinity Wholesale Water Customers



Using surface water supplies, Upper Trinity currently provides treated water service to nineteen Customers serving twenty-three communities in Denton and Collin Counties. Figure 2.2 lists both direct Customers of Upper Trinity and the other communities served indirectly.

Projections of water needs are based on dry-year demands and population growth anticipated by Customers, and reviewed and considered by Upper Trinity annually. Actual water usage will vary from year to year depending on climatic conditions, on growth and development within the service area and on various factors affecting retail customers within a Customer's residential, commercial, industrial and institutional customer categories. Upper Trinity's population projections and raw water demand projections for its planning area are included in the 2016 Region C Water Plan, and the 2017 State Water Plan.

Some Upper Trinity Customers use groundwater for a portion of their water supply. In Denton County, groundwater resources are very limited. The County has been included in a "Priority Groundwater Management Area" by the TCEQ; and, a groundwater conservation district has been created to manage and conserve groundwater resources within the County. One of the key purposes of Upper Trinity's regional water program is to avoid further draw-down of these limited groundwater resources, and to make surface water available as a more reliable and sustainable source for further growth in Upper Trinity's service area.

Appendix B of this Plan includes an updated water utility profile for Upper Trinity, based on the format recommended by TCEQ. The water utility profile includes additional information regarding population and Customer data, water use data, water supply system data, and wastewater system data.

## **SECTION 3**

### **Water Conservation Planning Goals**

As a wholesale water supplier, Upper Trinity does not have a direct relationship with retail customers who are the ultimate consumers of the treated water it provides to its Customers. Further, Upper Trinity doesn't have ordinance or policy power over such retail customers or their use of treated water supplied in wholesale transactions with Customers. As a result, and as noted in Section 4.4 and Section 5.7, Upper Trinity has limited control or influence over the use of water being purchased by its Customers. It's anticipated that Upper Trinity Customers will require increased supplies for their future growth and development, which may result in increases to historical municipal per capita use during and following periods of population growth. Reasons for such potential increases include:

- Upper Trinity's service area continues to transform from a historically rural to a primarily urban land use, causing some communities to experience an increase in per capita water use.
- Some Upper Trinity Customers will experience substantial population growth in future years, generating changes in commercial and economic activity. With a growing infrastructure of retail industrial, commercial, and institutional customers using water supplied by Upper Trinity to its wholesale Customers, increases in municipal per capita water use can be expected for these communities.

- The municipal per capita use for Upper Trinity's System can be affected by changes in per capita use for its Customers. It can also be affected by how much water Upper Trinity is asked to supply to different communities with widely varying growth factors and water usage characteristics. Nonetheless, Upper Trinity's water conservation efforts are expected to significantly influence per capita water use that could otherwise result from continued growth in its service area. Upper Trinity will make every effort to measure and quantify savings achieved through the programs it implements, and will encourage its Customers to measure savings from the programs they implement, as well.

Upper Trinity does, however, control the operation of its own water treatment and transmission system and can take direct action to maximize the water use efficiency of System operation. Upper Trinity adopts the following water conservation and efficiency goals within the System:

- Maintain the level of water loss in the System below five percent (5%) annually;
- Maintain a program of universal metering of Customers and regular meter calibration; and, meter replacement and repair;
- Maintain a program of leak detection and repair;
- Continue to utilize wastewater reuse as a major source of future water supply, to the maximum extent feasible;
- Continue to recycle wash-water from Upper Trinity water treatment plants, to the maximum extent feasible;
- Continue to implement other in-house water conservation efforts;
- Continue to raise public awareness of water conservation and encourage responsible public behavior through coordinated public education programs;
- Encourage landscape water management strategies on a routine basis to help instill good habits and responsible stewardship for water conservation;
- Maintain and promote a first-class demonstration program for water-smart practices in landscape and gardening;
- Expand public education about the need to protect water quality through a continuing program for watershed protection.

Upper Trinity completed an analysis of its historical water usage, as summarized in the Water Utility Profile included in Appendix B, and estimated water savings resulting from the implementation of this Plan. Based on this analysis, Upper Trinity has updated its 5-year and 10-year water use (in gallons per capita per day (GPCD)) and water loss goals as outlined in Table 3.1 below.



**Table 3.1  
Per Capita Water Use Goals**

Goal	Baseline <sup>4</sup>	5- Year	10-Year
		2024	2029
Total Per Capita Use (GPCD) <sup>1</sup>	189	170	165
Water Loss (GCPD) <sup>2</sup>	2	9.5	9.5
Water Loss (Percentage) <sup>3</sup>	2%	5%	5%

1. Total GPCD = (Total UTRWD Customer Use ÷ UTRWD Population Served) ÷ 365

2. Calculated as 5% of Baseline GPCD.

3. Goal to maintain UTRWD Water Loss Percentage below 5%.

4. Baseline is 2020 Region C for total per capita use, and 2014-2017 average for water loss per capita and water loss percent.

The above goals are based on the 2021 Region C Plan projection for 2020 of 189 GPCD. Region C estimates this baseline on the demand that would be expected during a hot, dry year, which allows Upper Trinity to evaluate the full benefit of its water conservation activities and their effectiveness at reducing water usage. In determining the updated 5-year and 10-year water conservation goals, Upper Trinity considered water savings resulting from water efficient plumbing codes (which includes replacing high flow toilets, showerheads, faucets and clothes washers to more efficient fixtures) based on information from the Texas Water Development Board. Additional water savings were recognized from Upper Trinity’s implementing its twice-weekly watering recommendation and the other elements of the Plan; and, as supported by plans to be implemented by Upper Trinity Customers. Table 3.2 below summarizes how Upper Trinity determined its 5-year and 10-year goals for municipal per capita water use.

**Table 3.2  
Summary of Goals Calculation**

	5-Year Goal (GPCD)	10-Year Goal (GPCD)
Region C Baseline	189	189
TWDB Plumbing Code Savings	8	10
Maximum Two Times per Week Watering Savings	3	4
Additional Conservation Measures, including Customers	8	10
<b>GPCD Goal</b>	<b>170</b>	<b>165</b>

The above table is based on a format provided by the Texas Water Development Board. To aid the water conservation planning around the state, the Texas Water Development Board has released its ‘Municipal Water Conservation Planning Tool’ (December 2018), with information on how to use the tool on their website. The Tool has pre-loaded data from past water use surveys submitted by many utilities, and a library of best management practices with potential water savings and cost estimates to implement. Upper Trinity will utilize the Tool when possible during future conservation planning efforts, and will encourage its Customers to utilize the tool when planning and tracking their water conservation activities.

## SECTION 4

### Basic Water Conservation Strategies

This section outlines Upper Trinity's basic water conservation program strategies that will be implemented to achieve and exceed the stated water conservation goals above.

#### 4.1 Accurate Supply Source Metering

Upper Trinity measures all raw water diversions using meters with an accuracy of plus or minus two percent (2%) in accordance with AWWA standards. Said meters are calibrated annually in accordance AWWA standards. When necessary, Upper Trinity will repair or replace meters not conforming to an accuracy of plus or minus two percent (2%).

#### 4.2 Monitoring and Record Management of Water Deliveries, Sales and Losses

Upper Trinity regularly monitors all water deliveries and sales to all Customers. All critical data, such as raw water conveyance to water treatment plants or to Customers, treated water pumped, and water loss is monitored on a regular basis. All water sources and water delivered to Customers is metered and recorded, as follows:

- Water delivered to all Customers is measured by individual meters with an accuracy of plus or minus two percent (2%) in accordance with AWWA standards, and in most cases with rate-of-flow controllers. Said meters are read monthly by Upper Trinity personnel, with the meter readings being used to invoice Customers. Meters are calibrated and tested annually, and as needed, in accordance with AWWA standards. Customers may witness the calibrations of these meters.
- Treated drinking water leaving the District's water treatment plants and pumping facilities is also measured by meters with a minimum accuracy of plus or minus two percent (2%).
- Upper Trinity monitors water loss in its treatment and transmission system to its Customers. (For Upper Trinity, water loss is defined as the amount of raw water diverted to or received at the treatment plants, less metered sales to Customers, less water used during the treatment process, and water used for line flushing and construction purposes.)

A goal of Upper Trinity's water conservation program is to maintain water loss below five percent (5%).

Upper Trinity encourages its Customers to consider implementing Advanced Metering Infrastructure (AMI) within their retail distribution system, and several have already done so. The benefits of AMI include improved billing procedures, alerting retail customers to potential leaks, and greater customer service and satisfaction. Upper Trinity has information about AMI on its website, and can be provided upon request by Customers.

#### 4.3 Program for Leak Detection & Repair, and Water Loss Accounting

Upper Trinity's metering program for raw and treated water is described in Sections 4.1 and 4.2 above. As evidenced by a low level of water loss, Upper Trinity has an effective program to control, detect and repair leaks:

- In most projects, Upper Trinity's water pipelines consist of ductile iron pipe, reinforced

concrete cylinder pipe, or steel cylinder pipe with an internal protective liner and an external protective coating and/or polywrap. Because of the multi layers of material, these pipelines have very long service lives and are not subject to excessive leaks.

- Most joints in Upper Trinity pipelines are designed with bell and spigot joint construction, including a rubber gasket. Some joints are welded. For larger lines other than ductile iron, each joint is also coated with grout for corrosion protection.
- All Upper Trinity pipelines are constructed in legally defined and identified rights-of-way, properly registered with authorities in each county. Most are in exclusive rights of way on private property, protecting the pipelines from possible damage by a third party.
- Upper Trinity routinely inspects its facilities and pipelines for leaks or mechanical problems using the latest industry technology. For example, Upper Trinity has recently used SmartBall technology to inspect and record the condition of the interior of the pipe. Repairs are undertaken as soon as practicable in order to minimize waste.
- Upper Trinity operates a program for identification of construction projects adjacent to Upper Trinity facilities and pipelines in order to minimize leaks caused by pipeline damage during construction.
- Upper Trinity's metering program allows comparison of metered flows in the System with metered deliveries to Customers, which can be used to identify leaks.
- Upper Trinity's regular monitoring of water loss provides a further check for problems in the transmission system.

#### **4.4 Requirement for Water Conservation Plans by Wholesale Customers**

Contracts for the wholesale purchase of water by Upper Trinity Customers provide that the wholesale Customer will develop water conservation and an emergency water demand management plan appropriate and adequate for local conditions and circumstances. These plans are subject to review and approval by Upper Trinity. Any new contract for wholesale water service entered and any renewed or extended contract with a Customer after the adoption of this Plan will require the Customer to adopt similar water conservation strategies as outlined in this Plan, and providing enforcement thereof. In addition, each Customer has agreed to coordinate with Upper Trinity the implementation of any action to limit or curtail water supplies to minimize adverse impact on Upper Trinity's water system operations, and on adequacy of service, and to promote public understanding of the need for and terms of such limitation or curtailment.

Current wholesale contracts utilized by Upper Trinity include some version of the following provisions:

*It is the policy of the District to prepare, adopt, and maintain a regional water conservation plan which incorporates loss reduction measures and demand management practices to insure that the System's available water supply is conserved and used in an economically efficient and environmentally sensitive manner. Similarly, it is the policy of the District to prepare, adopt and maintain a drought and emergency contingency plan to protect and maintain an adequate water supply to Customer needs. Each Customer agrees to cooperate fully in the implementation of the District's water conservation, drought, and emergency contingency plans related to the District's wholesale service. Further, in coordination with the District's plans, Customer agrees to adopt and enforce the District's*

*plans or plans that are substantially similar thereto related to Customer's retail service within its jurisdiction. Customer may be required by State or Federal agencies to implement a water conservation plan. The District reserves the right to require the Customer to implement water conservation and drought contingency plans that will result in the highest practical levels of water conservation and efficiency achievable with the Customer's physical and regulatory jurisdiction. The Customer's water conservation and drought contingency plans are subject to approval by District.*

Towns and cities have ordinance powers and greater capability to manage and enforce their own water conservation programs, as compared to a wholesale water supplier, such as Upper Trinity. Thus, in order to encourage local initiative and to respond to the diversity of powers, needs, and circumstances, Upper Trinity allows each Customer to develop its own conservation program, but Upper Trinity's contracts allow for its approval of such programs. To assist its Customers, Upper Trinity provides a model water conservation plan for all wholesale customers to use in developing their own water conservation plans.

#### **4.5 Reservoir System Operation Plan**

Upper Trinity currently purchases raw water from the City of Dallas and City of Denton out of Lewisville Lake and Ray Roberts Lake. In addition, Upper Trinity has a contract for up to 14.4 million gallons of raw water per day from Jim Chapman Lake in the Sulphur River Basin. Further, Upper Trinity has received a permit from TCEQ for the reuse of raw water being imported to the Trinity River Basin, treated to potable water standards, utilized by its Customers, returned to state streams via effluent discharges, and then diverted by Upper Trinity for a second treatment, delivery, and use by its Customers.

Water from Jim Chapman Lake is pumped by pipeline to Lewisville Lake. Treated wastewater effluent from Upper Trinity's four (4) water reclamation facilities and from treatment plants operated by certain Customers is returned to the Lewisville Lake watershed. Upper Trinity relies on the Cities of Dallas and Denton (and the U. S. Army Corps of Engineers) for the operation of Lewisville Lake and Ray Roberts Lake. In addition, the water rights holders of Jim Chapman Lake have developed a water supply operating plan which allows for overdrafting of the reservoir when it is relatively full and also protects the firm annual yield of the reservoir should the drought of record occur. Upper Trinity manages its use of water from these four sources (Lewisville Lake, Ray Roberts Lake, Jim Chapman Lake and from Reuse) on a system-wide basis to make maximum use of the most efficient or most available source.

#### **4.6 Coordination with Regional Water Planning Groups**

Appendix C includes a copy of a letter sent to the Chair of Region C Water Planning group to coordinate Upper Trinity's updated Plan with Region C. In addition, copies of the updated adopted Plan have been provided to the Executive Director of TCEQ and the Executive Administrator of the TWDB.

## **SECTION 5**

### **Enhanced Water Conservation Strategies**

This section outlines enhanced water conservation strategies that Upper Trinity will include as part of its water conservation program.

### **5.1 Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures**

The State of Texas has required water-conserving fixtures in new construction and renovations since 1992, with standards updated in 2010 (Texas Administrative Code, Title 30, Section 290.252). The State's standards call for flows of no more than 2.2 gallons per minute (gpm) at a pressure of 60 pounds per square inch (psi) for faucets, 2.5 gpm for showerheads at 80 psi, 1.28 gallons per flush for toilets, 0.5 gallons per flush for urinals, and 1.6 gpm for commercial pre-rinse spray valves. Similar standards are now required nationally under federal law. These state and federal standards assure that all new construction and renovations will use water-conserving fixtures. Upper Trinity encourages its Customers to incorporate these plumbing code standards into its building regulations.

Upper Trinity also encourages its Customers to evaluate the feasibility and merits of an optional rebate program to encourage replacement of older fixtures with water conserving fixtures. A rebate program may include one or more of the following concepts:

- High-efficiency toilet replacement and rebate;
- Pressure reduction in the system or for individual customers;
- High-efficiency showerhead and sink aerators replacement;
- High-efficiency clothes washer rebates; or
- Other indoor water conservation incentive programs.

### **5.2 Reuse and Recycling of Reclaimed Wastewater**

Upper Trinity has completed construction of four (4) regional water reclamation facilities with a total treatment capacity of 12.44 million gallons per day. These regional facilities provide wastewater treatment services to fourteen (14) municipalities and five (5) special districts. Reuse is practiced on one plant site for service water and irrigation of landscape.

Upper Trinity has constructed facilities and sells treated wastewater effluent to one of its Customers for golf course irrigation. Upper Trinity continues to advocate for additional opportunities, where feasible, to expand recycle and reuse markets.

Upper Trinity reuses up to 60% of the water it diverts from Jim Chapman Lake pursuant to a TCEQ reuse permit. The reuse permit is for a single reuse and pass-through cycle of the water imported from Jim Chapman Lake in the Sulphur River Basin. An extensive daily accounting system provides for management of this reuse project.

### **5.3 Public Education Program**

As a regional wholesale water supplier, Upper Trinity does not interact directly with retail water customers at whom typical water conservation public education efforts are aimed. However, Upper Trinity's public education program is intended to assist and supplement the public education efforts of its Customers.

The ultimate success of any water conservation program is dependent on an informed public. The individual retail customers must have an awareness of the benefits and needs for water conservation. They must also have knowledge of how to contribute to the success of the Plan. Upper Trinity's public education and information program, including dedicated staff for this program, is designed in cooperation with Customers to provide information to as many of the

Customers' retail customers as possible. The elements of Upper Trinity's education program are described below.

- *Informative School Program.* Educational tours of Upper Trinity's water treatment plants and demonstration garden are available, promoting water conservation and water quality protection. Also, water conservation is demonstrated to students using an EnviroScape watershed model. This model provides hands-on interaction to show at least twenty different ways of protecting and conserving water. Additional "stations" that Upper Trinity may use during a tour include a stream erosion trailer and a rainfall simulator to demonstrate watershed protection principles that can protect water quality in local reservoirs. Upper Trinity hosts approximately 200 – 300 students every year. Additional educational opportunities may include classroom presentations, curriculum aids and materials, and teacher workshops.
- *Literature Program.* As part of its water conservation literature program, brochures are designed to educate the public on various water conservation methods. Upper Trinity will make available water conservation brochures covering the following topics:
  - Saving water outdoors,
  - Saving water indoors,
  - Use of native plants and wildflowers in low water-use landscaping,
  - Efficient irrigation methods,
  - Retrofitting existing structures with high efficiency showerheads and high efficiency toilets.
- *Special Events and Promotions.* For special events sponsored by Customers, Upper Trinity makes available water conservation promotional items such as Texas Smartscape bookmarks, toilet-leak test kits, Upper Trinity water bottles, water conservation booklets, T-shirts, pet waste bag holders, etc. Upper Trinity also hosts special events focused on conserving water in the landscape and on protecting water quality.
- *Website and Social Media.* Upper Trinity has included a section on its website dedicated to water conservation. Conservation publications, videos, and links to other resources are also available online. Upper Trinity has Facebook and Twitter pages, and a YouTube channel, where water conservation and watershed protection information are provided as well.
- *Speaking Engagements.* Speakers and presentations are available from Upper Trinity, which promote water conservation ideas to environmental groups, garden clubs, senior citizen centers, youth groups, civic groups, and other citizen and professional groups.
- *Public Awareness Campaign.* Upper Trinity will promote the importance of conservation by placing public service announcements and advertisements on radio, television, digital billboards and websites or by promoting newspaper articles and advertisements in newspapers with general circulation in the service area. In accomplishing this strategy, Upper Trinity may partner with other entities to promote a

regional conservation message on radio, television and other media.

- *Regional Cooperation.* Upper Trinity will continue to coordinate with other North Texas water suppliers and Customers to benefit all entities in promoting water conservation. Upper Trinity will coordinate with the City of Dallas, North Texas Municipal Water District, and the Tarrant Regional Water District to plan and host the North Texas Water Conservation Symposium, held every fall, beginning in 2019.
- *Memberships.* Upper Trinity maintains memberships with the Alliance for Water Efficiency, as a Texas Water Development Board 'WaterIQ' Partner, and as an EPA WaterSense Promotional Partner. These memberships allow Upper Trinity to utilize resources from these organizations in its Public Education and Outreach efforts.

Below is a sample list of Education and Outreach activities Upper Trinity has conducted (2015 – 2018). Upper Trinity, in coordination and partnership with its Customers, will continue to explore opportunities for additional activities.

## 2015 - 2018 OUTREACH ACTIVITIES

ACTIVITY	GENERAL DESCRIPTION	AUDIENCE
Informative School Program	Upper Trinity hosts tours for groups ranging from 3 <sup>rd</sup> grade to college students. Staff discuss water conservation and watershed protection principles using demonstrations, such as an Enviroscape watershed model, rainfall simulator, stream erosion trailer, Conservation Garden, and water treatment plant. Staff are also available for classroom presentations.	Students ranging from 3 <sup>rd</sup> grade to college.
Special Events	Upper Trinity sponsors booths at community events sponsored by Customers and Members. Such events include the Highland Village Balloon Festival, Corinth Pumpkin Palooza, Pilot Point Bonnie & Clyde Days, Lantana Earth Day	Residents, children and other attendees of events
Website and Social Media	Upper Trinity is active on the various social media platforms, including native content; and, shares/boosts other related material from partnering agencies. Upper Trinity has a growing web presence through its main website, Facebook, Twitter and YouTube.	Residents and other interested stakeholders
Speaking Engagements	Upper Trinity Staff are available for water conservation and watershed protection presentations for groups.	Garden clubs, civic groups, Utility meetings, Environmental clubs
Public Awareness Campaign	Promote water conservation and watershed protection principles and websites by a variety of avenues.	Digital advertising, billboards, print articles and advertisements

#### 5.4 Water Conserving Landscaping

As part of its public education program, Upper Trinity has a Water Wise Demonstration Garden (located at its headquarters in Lewisville, TX) employing **Texas SmartScape®** principles. **Texas SmartScape** was developed in cooperation with cities, utilities and other agencies, including Upper Trinity, to educate citizens on the ecological, economic and aesthetic benefit of using landscape plants, shrubs, grasses and trees that are native or adapted to the regional climate and local conditions.

The goal of the Water Wise Garden is to demonstrate that outdoor landscapes can be both practical and beautiful, using earth-friendly techniques that conserve water resources and protect water quality. Upper Trinity encourages each Customer to use the Water Wise Garden to demonstrate how to conserve water in landscape practice. Further, the Water Wise Garden is available to garden clubs, developers, and customers throughout the North Texas region to advance public knowledge of water conservation in home and business landscapes. Throughout the year, the Water Wise Garden is used to promote water conservation and watershed protection during public education tours.

Upper Trinity encourages Customers and residents to use the Texas A&M AgriLife Research and Extension Center at Dallas – Water University plant database and landscape design tool, 'ULandscapelt,' to help residents plan their own landscape with native and adaptive plants. The Water University website is [wateruniversity.tamu.edu](http://wateruniversity.tamu.edu).

#### 5.5 Landscape Water Management

To promote the efficient use and stewardship of water and to provide a consistent message throughout Upper Trinity's service area, Upper Trinity urges each Customer to include the following landscape water management strategies into their respective water conservation plans:

- *Watering Maximum of Two Times per Week.* Limit outdoor watering (automatic systems or hose-end sprinklers) to no more than two (2) times per week. Watering with hand-held hoses, soaker hoses or drip irrigation is allowed any time. (Currently, this strategy is voluntary until Stage 1 of Upper Trinity's Drought Contingency Plan is initiated. Upper Trinity will continue to evaluate the necessity and feasibility of implementing mandatory watering maximum of two times per week as part of its Water Conservation Plan.)
- *Time of Day Watering.* No outdoor watering with automatic irrigation systems or hose-end sprinklers from 10:00 am to 6:00 pm each day beginning June 1 and ending September 30 of each year. Watering with hand-held hoses, soaker hoses, or drip irrigation systems is allowed anytime.

Additional strategies that may be adopted to reduce waste in landscape irrigation include, but are not limited to:

- Require all new irrigation systems include rain and freeze sensors;
- Require all new irrigation systems be in compliance with state design and installation standards (TAC Title 30, Part 1, Chapter 344);
- Prohibit the design, installation, and operation of irrigation systems that spray directly onto impervious surfaces such as sidewalks and roads or onto other non-irrigated areas;
- Require well maintained automatic irrigation systems to avoid waste of water, such as repairing broken sprinkler heads, or leaking or broken valves or pipes;
- Prohibit outdoor watering during any form of precipitation and during freezing temperatures and;



- Enforce strategies by a system of warnings followed by fines for continued or repeat violations.

Each Customer will be responsible for implementing, communicating and enforcing these landscape water management strategies within its respective jurisdictions. Ensuring that irrigation systems are properly designed and installed will maximize water efficiency during operation.

Upper Trinity also encourages its Customers to evaluate the feasibility and merits of an optional rebate program to encourage greater efficiency in outdoor irrigation systems. A rebate program may include one or more of the following concepts:

- Rain/freeze sensors for irrigation systems;
- Smart controllers for irrigation systems;
- Other outdoor water conservation incentive programs.

Recognizing that the goal of these strategies is to help instill good habits for conservation of water - - not to be punitive - - each Customer shall have maximum flexibility in administering same. Unless a drought contingency stage is in effect, Customers will be encouraged to allow each retail customer to select the two most convenient days of each week for outdoor watering.

These strategies are intended to be actively promoted by the Customers through public information programs for voluntary or mandatory compliance by their respective retail customers. Upper Trinity will include these strategies as part of its regional public information program and within its model water conservation plan for use by Customers.

During any period that a drought contingency stage is in effect, these strategies would become mandatory and are required to be enforced by all Customers.

In 2015, Upper Trinity partnered with Texas A&M AgriLife to implement the 'Water My Yard' outdoor watering management program to Upper Trinity's service area. The 'Water My Yard' website, WaterMyYard.org, allows residents to receive weekly lawn watering recommendations, which are given in minutes. Recommendations are based on data from three weather stations that Upper Trinity has installed in its service area, as well as the landscape's needs, to prevent unnecessary overwatering. 'Water My Yard' is provided at no cost to Customers and residents, and Upper Trinity encourages Customers to promote 'Water My Yard' to their respective retail customers. There are nearly 1,700 subscribers to 'Water My Yard' in Upper Trinity's service area.

## **5.6 Pressure Control to Maintain System Integrity**

Upper Trinity installs all necessary pressure control stations to deliver water into each Customer's storage tank. Whenever feasible, Upper Trinity conserves energy by minimizing surplus pressure (head) available at the delivery point to the Customer. Upper Trinity encourages each Customer to determine a reasonable system pressure for each pressure zone in its retail distribution system, install internal pressure control stations where necessary, or install customer service pressure regulators where needed.

## **5.7 Watershed Protection**

Protecting our watershed is a priority need for every citizen and every community. As a double benefit, strategies that promote water conservation also tend to protect the quality of water resources. Using earth-friendly techniques, such as native and adaptive plant materials and

organic techniques for landscaped areas, requires less water and less use of fertilizers, pesticides and other chemicals. Overuse or improper use of fertilizer, pesticides and other chemicals from landscape activities is also a major source of pollutants that find their way into water resources. Upper Trinity has developed a coordinated program for watershed protection aimed at educating the public about protecting local watersheds and water quality. To help communicate the important role that watersheds have in the water supply for this region, Upper Trinity has created a watershed logo and sign. These signs are placed along roadways in Upper Trinity's service area as a constant reminder that we need to keep the watersheds clean.

In 2015, Upper Trinity partnered with Denton County and the Upper Trinity Conservation Trust to develop the Denton County Greenbelt Plan ("Greenbelt Plan"). The Greenbelt Plan identifies greenbelt corridors (the vegetated areas along creeks, rivers and lakes) that are in need of preservation in order to protect water quality in the three major water supply reservoirs in Denton County. The Greenbelt Plan serves as a guide for municipalities, developers, landowners and others and outlines strategies that can be used to protect and preserve greenbelts in their respective areas. The Greenbelt Plan is voluntary in nature and can be implemented according to the needs of the stakeholders adopting the Greenbelt Plan. The Greenbelt Plan Sponsors continue to encourage the implementation of the Greenbelt Plan throughout the County by establishing and maintaining a Coordinating Committee, made up of a diverse group of stakeholders, to champion the Greenbelt Plan for years to come.

## **5.8 Enhanced Contract Provisions**

All basic contract provisions identified in Section 4.4 will be incorporated into future wholesale water supply contracts. Amendments to wholesale water supply contracts entered into after the adoption of this Plan, including any contract extension or renewal, will require Customers to include strategies included within this Plan into their own water conservation plans. These provisions, coupled with Upper Trinity's prohibition on the subsequent resale of water on a wholesale basis without prior written approval of Upper Trinity, will enable Upper Trinity to achieve the objectives of this Plan.

## **5.9 Irrigation System Evaluations / Technical Assistance**

To improve water conservation and efficiency in landscape watering practices, Upper Trinity will, if requested, provide technical assistance and training to Customers and their retail customers (residential, industrial, commercial and institutional). The assistance provided to the Customers could include actual evaluation of the retail customers irrigation system; or, as an alternative, Upper Trinity could offer a training program to its Customers to enable them to perform said irrigation system evaluations.

Beginning in 2017, Upper Trinity began a residential irrigation system evaluation program that is promoted mainly through Customer cities and utilities. Evaluations are paid for by Upper Trinity and at no-charge to residents. A typical evaluation includes identification of potential leaks, diagnosis of equipment malfunctions, and recommendations for equipment upgrades and controller settings to enhance water efficiency. During the evaluation, education about good landscape watering practices and the use of earth-friendly materials is shared with the retail customer. Upper Trinity has conducted 150 evaluations in 2017 and again in 2018, and plans to increase in future years depending on the demand from residents.

In 2019, Upper Trinity began hosting a Green Pros program, adapted from the Tarrant Regional Water District and Tarrant County AgriLife program, to provide education to irrigation and landscape professionals. The program is a 5-part series with topics such as water efficient landscaping, green stormwater infrastructure, and irrigation technology. Once completed, the participants are recognized as Green Professionals with their company information listed on the 'Save Tarrant

Water' website as a resource for homeowners looking for companies to use for their irrigation systems and landscapes.

### **5.10 Industrial, Commercial and Institutional (ICI) Audits**

Upper Trinity, in coordination with its Customers, will offer an outreach program to assist large water users in finding ways to operate more efficiently, save water and energy, and lower their costs. Water savings are realized as the ICI customers implement audit recommendations. In addition to these audits, Upper Trinity would publicly recognize those ICI customers who have implemented said recommendations and have taken proactive steps in using water more wisely and efficiently.

In 2018, the Denton County Commissioners Court entered into an agreement to make the Property Assessed Clean Energy (PACE) financing program available to non-residential property owners. The PACE program provides low cost, long-term financing for energy and water efficiency upgrades for commercial, industrial, institutional and multi-family properties. Upper Trinity will promote this in ICI outreach efforts that are conducted.

### **5.11 Annual Reports**

An important element of Upper Trinity's model water conservation plan is for Customers to provide a copy of its annual conservation report to Upper Trinity at the same time it submits the report to TCEQ. Upper Trinity will compile these reports and use the information to help generate its own annual water conservation report. Upper Trinity's report will be used to review the effectiveness of its water conservation program and will be shared with Upper Trinity's Board and the Water Conservation Committee.

### **5.12 Means for Measuring Success**

Upper Trinity will make every effort to measure and quantify water savings achieved through its programs and will encourage Customers to measure and quantify savings from their respective programs. The water saving results from Upper Trinity and its Customers will be regularly reported to the Region C Water Planning Group to incorporate in the State Water Plan. Upper Trinity, with assistance from an outside consultant, created a model to estimate water savings based on the Conservation Plan. Upper Trinity reduced water usage during years of no drought conditions, and even more so during Stage 1 drought restrictions. The model may be used annually to estimate water savings for the annual water conservation report to the Texas Water Development Board.

### **5.13 Water Rate Surcharge**

Upper Trinity has a conservation-oriented water rate surcharge as part of its rate structure for Customers. The rate structure for wholesale treated water service is two-part, based on demand and volume. The conservation-oriented surcharge takes effect when the actual volume of water sold during the months of June through September exceed the volume of water budgeted for the same time period by more than 5%. The surcharge rate is established annually by Upper Trinity's Board of Directors.

### **5.14 Recycle Water from Water Treatment Plants**

The wash water from filter washing and sludge from Upper Trinity's water treatment process are pumped into lagoons for recycling. After settling of solids, suitable water is decanted from the lagoons and recycled to the head of the water treatment plant for treatment. This saves water and contributes to Upper Trinity's control of water loss in treatment and transmission.

### **5.15 In-House Water Conservation Efforts**

Upper Trinity has implemented an in-house water conservation program, including the following

elements:

- Upper Trinity uses native or adapted drought tolerant plants, trees, and shrubs in the majority of its landscapes;
- Irrigation at Upper Trinity facilities occurs during off-peak times at night and early morning to avoid evaporation losses;
- Irrigation will be limited to the amount needed to promote survival and health of plants and lawns, including limitation on frequency and time-of-day watering (see Section 5.4);
- Irrigation will be avoided on Saturday and Sunday if possible, since these are periods of high water use by the public;
- Irrigation will be accomplished with treated wastewater effluent wherever feasible and practicable.

### **5.16 Model Water Conservation Plan for Upper Trinity Customers**

Upper Trinity has developed two key documents as part of its water conservation strategies: (1) a *Model Water Conservation Plan*; and, (2) a *Model Drought Contingency Plan*. These model plans are valuable aids to Customers in developing their own water conservation and drought contingency plans, providing for consistency and clarity throughout Upper Trinity's service area.

A. The *Model Water Conservation Plan* addresses TCEQ Ch. 288 requirements for water conservation for municipal use by Public Water Suppliers. Upper Trinity will work with its Customers in developing or updating their individual water conservation plans using the following requirements:

- *Utility Profile*: Information regarding population and customer data, water use data, water supply system data, and wastewater system data.
- *Goals*: Specific quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use, in gallons per capita per day (GPCD). The goals established by a Public Water Supplier are not enforceable under this subparagraph.
- *Accurate Metering Devices*: TCEQ requires that metering devices have an accuracy of plus or minus five percent (5%) for measuring water diverted from the source of supply.
- *Universal Metering, Testing, Repair and Replacement*: A program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement. Upper Trinity encourages its Customers to evaluate the costs and benefits of Advanced Metering Infrastructure to determine if it is a feasible part of their conservation efforts.
- *Determination and Control of Water Loss*: Specific measures to determine and control water loss below 15%. The measures may include periodic visual inspections along distribution pipelines, periodic audits of the water system for illegal connections or abandoned services.
- *Public Education Program*: A public education and information program regarding water conservation is required as part of the water conservation plan.
- *Non-Promotional Water Rate Structure*: Chapter 288 requires a water rate structure that is not "promotional"; that is, rates that discourage waste and excessive use of water, such

as increasing block rate instead of volume discounts.

- *Landscape Water Management Strategy:* A strategy for implementing and enforcing the efficient use and stewardship of water in landscape irrigation, including watering a maximum of two times per week; and, including a time-of-day watering provision.
- *Reservoir Systems Operational Plan:* If applicable, this requirement is to provide a coordinated operational structure for operation of reservoirs owned by the water supply entity within a common watershed or river basin in order to optimize available water supplies.
- *Coordination with Regional Water Planning Group:* To document that the water conservation plan has been coordinated with the Regional Water Planning Group to insure consistency with the appropriate approved regional water plan.
- *Means of Implementation and Enforcement:* A strategy for implementing and enforcing the provisions of a water conservation plan, as evidenced by an ordinance, resolution, or tariff, and a description of the authority by which the plan is enforced.

B. The *Model Water Conservation Plan* covering municipal uses by Public Water Suppliers that: (1) currently serve a population of 5,000 or more; or (2) a projected population of 5,000 or more within ten (10) years from the effective date of the plan; or (3) provide potable water service to 3,300 or more connections, are required to include the following additional strategies.

- *Program for Leak Detection & Repair, and Water Loss Accounting:* A program of leak detection and repair, and water loss accounting for the water transmission, delivery, and distribution system.
- *Record Management System:* A system to record water pumped, water deliveries, water sales and water losses which allows for the desegregation of water sales and uses into user classes (residential, commercial, public and institutional, and industrial).
- *Wholesale Customer Requirements:* If applicable, include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement water conservation strategies similar to this Plan, including applicable elements of Title 30 TAC Chapter 288.

C. Upper Trinity will work with each Customer to evaluate and incorporate, as appropriate, enhanced conservation strategies identified throughout Section 5 herein to achieve Upper Trinity's conservation goals.

### **5.17 Conservation Work Group / Technical Assistance for Customers**

Upper Trinity has an appointed conservation coordinator to lead its regional water conservation program and to assist Customers with implementation of their respective conservation plans and strategies. Upper Trinity maintains a work group within the Customer Advisory Council for the Regional Treated Water System to coordinate and communicate consistent conservation strategies to Customers, to better focus on water conservation matters and to encourage Customers to designate staff with responsibility for implementing and reporting on their water conservation programs. The work group meets at least annually to review current and planned

education and outreach activities, discuss conservation strategies and to coordinate updates to conservation and drought contingency plans.

Upper Trinity provides resources to its Customers to benefit their respective conservation programs. These resources include digital advertisements and infographics, videos, and publications. Upper Trinity staff are available upon request, and for presentations at community events, such as the Highland Village Balloon Festival and the Corinth Pumpkin Palooza. Upper Trinity also provides conservation classes at no cost to the Customers. Class topics include water efficient landscape plants, native plant selection and maintenance, and irrigation system maintenance and efficient watering methods.

## **SECTION 6**

### **Implementation and Enforcement of the Plan**

Upper Trinity has coordinated with its Water Conservation Work Group, the Board's Water Conservation Committee, and the Board of Directors regarding the proposed updates to the Plan. The proposed updated Plans were made available to Upper Trinity Customers and to the public for review and comment, which comments were incorporated into this updated Plan.

Appendix D contains a copy of the resolution of Upper Trinity's Board of Directors adopting this updated Plan (and Upper Trinity's drought contingency plan). The Executive Director of Upper Trinity is authorized to implement and enforce the Plan and the drought contingency plan. Upper Trinity will prepare a water conservation report every year, incorporating the reports required from Customers as appropriate. This report will be used to review the effectiveness of Upper Trinity's water conservation program, and results will be reported to the Water Conservation Committee and to the Board of Directors.

The Plan is also referenced in Upper Trinity's wholesale water supply contracts, as noted in Sections 4.4 and 5.8 herein, and there is a prohibition on the resale of water on a wholesale basis without prior written approval by Upper Trinity. As such, Upper Trinity's contractual relationships with its Customers provide for a reasonable means for enforcing the Plan.

## APPENDIX A

### TCEQ Minimum Requirements for a Water Conservation Plan

(Title 30, Part 1, Chapter 288, Subchapter A, Rule §288.5 of TAC)

#### Water Conservation Plans for Wholesale Water Suppliers – Effective December 6, 2012

A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

(A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;

(B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;

(C) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(D) a monitoring and record management program for determining water deliveries, sales, and losses;

(E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;

(F) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(G) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;

(H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(I) documentation of coordination with the regional water planning groups for the service area

of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;

(C) a program for reuse and/or recycling of wastewater and/or graywater; and

(D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. The wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.



## **Appendix B**

Upper Trinity Regional Water District's Water Utility Profile



## Texas Commission on Environmental Quality

Water Availability Division

MC-160, P.O. Box 13087 Austin, Texas 78711-3087

Telephone (512) 239-4691, FAX (512) 239-2214

### Utility Profile and Water Conservation Plan Requirements for Wholesale Public Water Suppliers

This form is provided to assist wholesale public water suppliers in water conservation plan development. If you need assistance in completing this form or in developing your plan, please contact the Conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4691.

Water users can find best management practices (BMPs) at the Texas Water Development Board's website <http://www.twdb.texas.gov/conservation/BMPs/index.asp>. The practices are broken out into sectors such as Agriculture, Commercial and Institutional, Industrial, Municipal and Wholesale. BMPs are voluntary measures that water users use to develop the required components of Title 30, Texas Administrative Code, Chapter 288. BMPs can also be implemented in addition to the rule requirements to achieve water conservation goals.

#### Contact Information

Name: Upper Trinity Regional Water District

Address: PO Box 305, Lewisville, TX 75067

Telephone Number: (972)219-1228


Water Right No.(s): 5778, 5701, 5821

Regional Water Planning Group: C

Person responsible for implementing conservation program: Jason Pierce Phone: (972) 219-1228

Form Completed By: Jason Pierce

Title: Manager of Customer Contracts and Support Services

Signature:  Date: 04/18/2019

**A water conservation plan for wholesale public water suppliers must include the following requirements (as detailed in 30 TAC Section 288.5). If the plan does not provide information for each requirement, you must include in the plan an explanation of why the requirement is not applicable.**

## Utility Profile

### I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA

#### A. Population and Service Area Data:

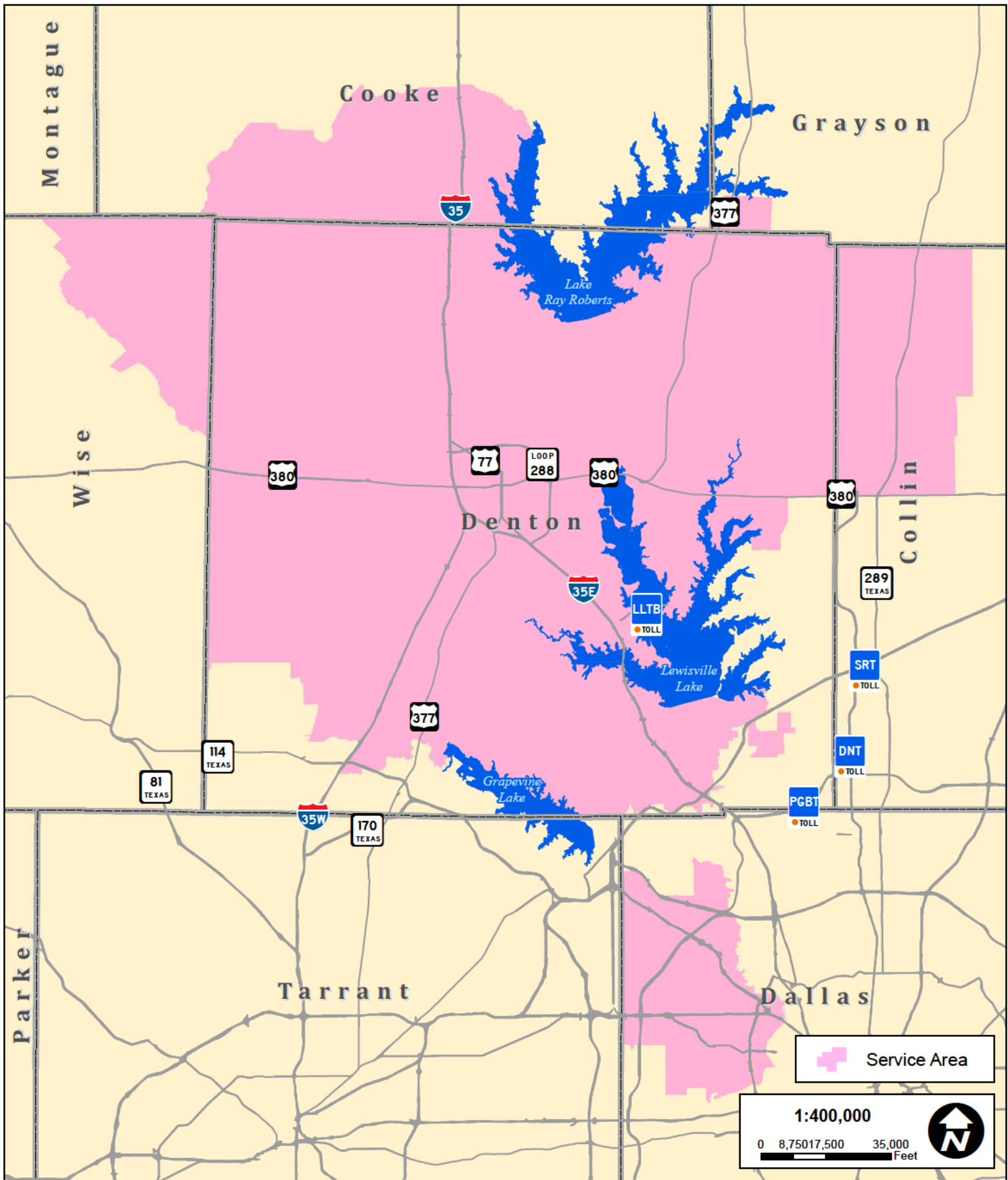
##### 1. Service area size (in square miles):

(Please attach a copy of service-area map)

Upper Trinity Regional Water District (“Upper Trinity”) is a wholesale water utility created by the Legislature of the State of Texas. Upper Trinity’s service area (see Figure 1 below) is defined in its enabling legislation as the service area of its retail customers:

*“The boundaries of Upper Trinity are coterminous with the boundaries of the county (Denton) plus the entire area in the boundaries of any contract member or participating member, a portion of whose incorporated limits is partially in the boundaries of the county (Denton) as those boundaries existed on the effective date of the Act.” (H.B. 3112, 1989)*

In addition, there is no limitation on other customers being served by Upper Trinity outside its boundaries: for example, a portion of Wise County and Cooke County are shown in the Region C Plan to be served by Upper Trinity.



# District Service Area

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Date: 4/18/2019

Author: Mark Stelzel

Document: 20190418MTS1

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2. Current population of service area:

295,750 (not including Denton, Lewisville and Irving)

3. Current population served for:

a. Water 267,069

b. Wastewater 111,568

4. Population served for previous five years:

<i>Year</i>	<i>Population</i>
2018	267,069
2017	251,867
2016	236,600
2015	218,000
2014	202,939

5. Projected population for service area in the following decades:

<i>Year</i>	<i>Population</i>
2020	308,470
2030	426,951
2040	521,787
2050	633,208
2060	699,223

6. List source or method for the calculation of current and projected population size.

2016 Region C Water Plan

North Central Texas Council of Governments

TWDB Water Use Surveys

Upper Trinity Regional Water District Annual Customer Surveys

*B. Customer Data*

List (or attach) the names of all wholesale customers, amount of annual contract, and amount of annual use for each customer for the previous year:

<i>Wholesale Customer</i>	<i>Contracted Amount (Acre-feet)</i>	<i>Previous Year Amount of Water Delivered (acre-feet)</i>
Argyle Water Supply Corp	2,240	964
City of Celina	5,231	2,371
City of Corinth	8,401	3,415
Cross Timbers Water Supply Corp	2,800	702

Denton County FWSD No. 1A	3,360	1,665
Denton County FWSD No. 7	3,920	1,918
Denton County FWSD No. 8A	2,431	267
Denton County FWSD No. 10	919	1,023
Denton County FWSD No. 11A	3,360	1,257
Town of Flower Mound	33,604	10,339
City of Highland Village	3,360	2,341
City of Justin	952	481
City of Krum	448	69
Lake Cities MUA	4,257	1,742
Mustang SUD	5,018	3,075
Town of Northlake	3,215	927
Town of Providence Village	2,688	760
City of Sanger	560	168

## II. WATER USE DATA FOR SERVICE AREA

### A. Water Delivery

Indicate if the water provided under wholesale contracts is treated or raw water and the annual amounts for the previous five years (in acre feet):

<i>Year</i>	<i>Treated Water</i>	<i>Raw Water</i>
2018	33,483	19.85
2017	30,594	0
2016	29,892	5.5
2015	28,404	0
2014	25,578	15.6
<b>Totals</b>	<b>147,952</b>	<b>40.95</b>

### B. Water Accounting Data

1. Total amount of water diverted at the point of diversion(s) for the previous five years (in acre-feet) for all water uses:

<i>Year</i>	<i>2018</i>	<i>2017</i>	<i>2016</i>	<i>2015</i>	<i>2014</i>
<i>Month</i>					
January	1,727	1,772	1,498	1,454	1,420
February	1,513	1,590	1,524	1,249	1,232
March	1,927	2,004	1,731	1,348	1,491
April	2,495	2,097	2,037	1,492	1,646
May	3,348	3,043	2,026	1,440	2,202
June	4,071	2,813	2,801	2,303	2,366
July	5,138	3,387	3,899	3,728	2,946
August	4,406	3,108	3,909	4,857	3,519
September	2,680	3,587	3,235	4,060	3,312
October	2,323	2,989	3,043	3,272	2,531
November	1,975	2,323	2,328	1,768	1,503
December	1,882	1,881	1,856	1,512	1,409
<b>Totals</b>	<b>33,502.85</b>	<b>30,594</b>	<b>29,897.5</b>	<b>28,404</b>	<b>25,593.6</b>

2. Wholesale population served and total amount of water diverted for **municipal use** for the previous five years (in acre-feet):

<i>Year</i>	<i>Total Population Served</i>	<i>Total Annual Water Diverted for Municipal Use</i>
2018	267,069	33,502.85
2017	251,867	30,594
2016	236,600	29,897.5
2015	218,000	28,404
2014	202,939	25,593.6

*C. Projected Water Demands*

If applicable, project and attach water supply demands for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirements from such growth.

<i>Year</i>	<i>Projected Water Demands (acre-feet)</i>
2020	46,264
2021	48,260
2022	50,256
2023	52,252
2024	54,248
2025	56,244
2026	58,240
2027	60,236
2028	62,232
2029	64,228

### III. WATER SUPPLY SYSTEM DATA

#### A. *Projected Water Demands*

List all current water supply sources and the amounts authorized (in acre feet) with each.

<i>Water Type</i>	<i>Source</i>	<i>Amount Authorized</i>
Surface Water	Jim Chapman Lake <sup>1</sup>	16,106 <sup>2</sup>
Contract	City of Dallas <sup>3</sup>	31,670
Contract	City of Denton <sup>4</sup>	3,350
Reuse	Jim Chapman Lake <sup>5</sup>	9,664

<sup>1</sup> Certificate of Adjudication No. 03-4797 and a contract with the City of Commerce allows the District to divert water from Jim Chapman Lake.

<sup>2</sup> Amount shown is the maximum diversion amount.

<sup>3</sup> Contract with the City of Dallas allows the District to divert water from Lewisville Lake and Ray Roberts Lake. The amount of supply will increase over time as population of certain "named" increases.

<sup>4</sup> Contract with the City of Denton allows the District to divert water from Lewisville Lake and Ray Roberts Lake on an interim basis. The amount of supply available is determined annually by Denton and will decline over time as Denton's own needs increase.

<sup>5</sup> TCEQ Water Use Permit No. 5778, and supporting contracts with the cities of Dallas and Denton, allows the District to reuse an amount equal to 60% of the water it imports from Jim Chapman Lake.

#### B. *Treatment and Distribution System (if providing treated water)*

##### 1. Design daily capacity of system (MGD):

90 MGD



2. Storage capacity (MGD):
  - a. Elevated 0.5 MGD
  - b. Ground 18.3 MGD
3. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks.

**Thomas E. Taylor Regional Water Treatment Plant - Lewisville**

1. Designed daily capacity of system in gallons - 70,000,000
2. Storage capacity:
  - a. Elevated storage in gallons - 500,000
  - b. Ground storage in gallons - 14,300,000
3. Wholesale water supplier connections
  - a. Municipal - 19

**Tom Harpool Regional Water Treatment Plant – Providence Village**

1. Designed daily capacity of system in gallons - 20,000,000
2. Storage capacity:
  - a. Elevated storage in gallons - zero
  - b. Ground storage in gallons - 4,000,000
3. Wholesale water supplier connections
  - Municipal - 4

**IV. WASTEWATER SYSTEM DATA**

*A. Wastewater System Data (if applicable)*

1. Design capacity of wastewater treatment plant(s) (MGD):  
12.44 MGD
2. Briefly describe the wastewater system(s) of the area serviced by the wholesale public water supplier. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

**a. Lakeview Regional Water Reclamation System**

Irrigation On-site: Yes

Irrigation Off-site: No

Chlorination / dechlorination: None, uses UV disinfection

Approximate usage per month: 0.040 MGD

TCEQ number TX0020354, TPDES 10698-001

Operator / Owner: Upper Trinity

Disposal Type: Activated Sludge

Discharge: 4.986 MGD (avg. daily flow)

Discharge receiving stream: Lewisville Lake Segment #0.0823 Trinity River Basin

b. Riverbend Water Reclamation Plant

Irrigation On-site: No

Irrigation Off-site: No

Chlorination / dechlorination: None, uses UV disinfection

Approximate usage per month: 0 MGD

TCEQ number TX0123781, TPDES 10698-002

Operator / Owner: Upper Trinity

Disposal Type: Activated Sludge

Discharge: 1.738 MGD (avg. daily flow)

Discharge receiving stream: Lewisville Lake Segment #0.0823 Little Elm Creek, Trinity River Basin

c. Peninsula Water Reclamation Plant

Irrigation On-site: No

Irrigation Off-site: No

Chlorination / dechlorination: None, uses UV disinfection

Approximate usage per month: 0 MGD

TCEQ number TX0124745, TPDES 14323-001

Operator / Owner: Upper Trinity

Disposal Type: Activated Sludge Extended Aeration

Discharge: 0.615 MGD (avg. daily flow)

Discharge receiving stream: Lewisville Lake Segment #0.0823 Cantrell Slough, Trinity River Basin

d. Doe Branch Water Reclamation Plant

Irrigation On-site: No

Irrigation Off-site: No

Chlorination / dechlorination: None, uses UV disinfection

Approximate usage per month: 0 MGD

TCEQ number TX0125172, TPDES 10698-003

Operator / Owner: Upper Trinity

Disposal Type: Activated Sludge Extended Aeration

Discharge: 2.285 MGD

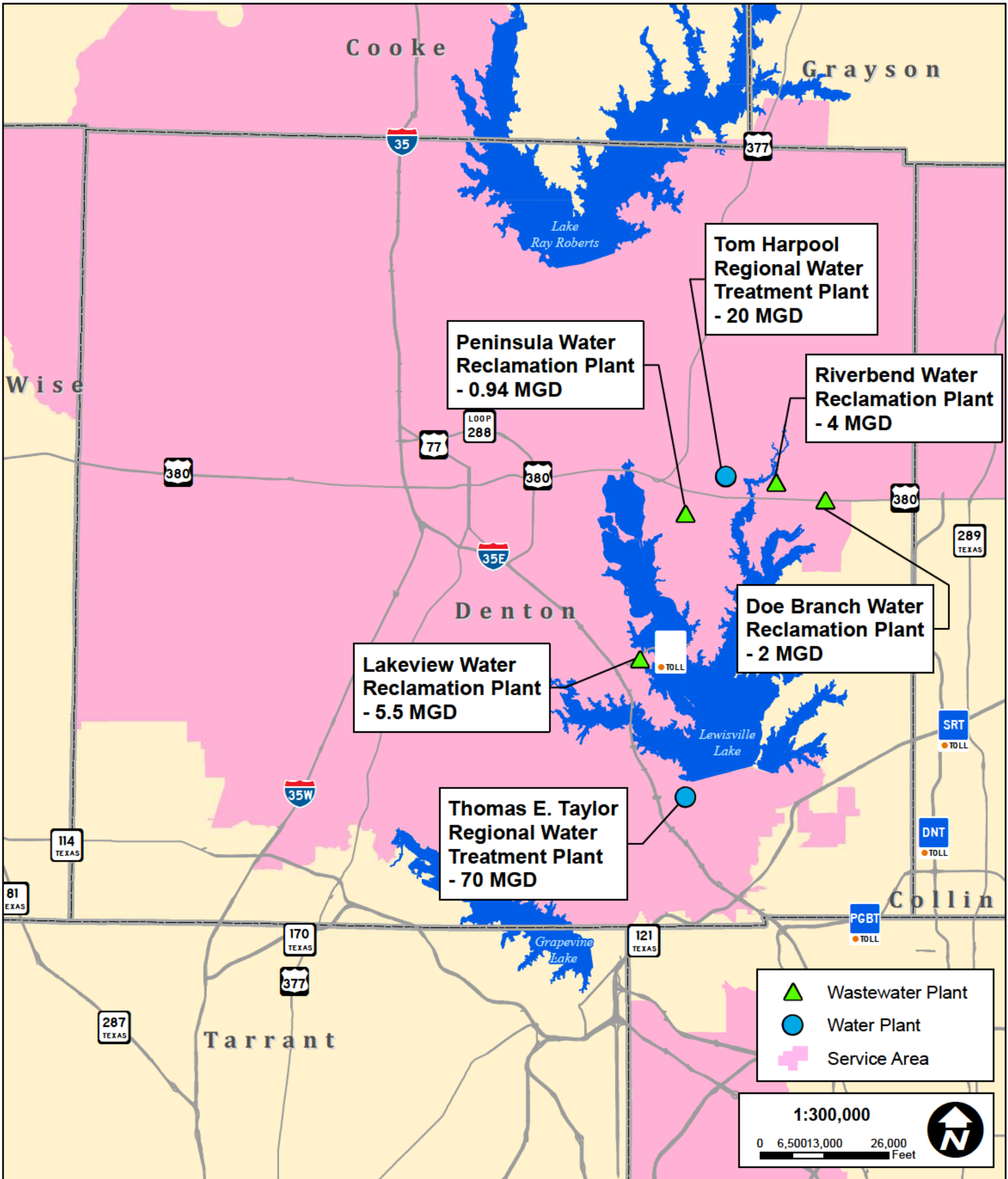
Discharge receiving stream: Lewisville Lake Segment #0.0823 Unnamed Tributary, Trinity River Basin

See map titled “District Plants” showing approximate locations of each Wastewater and Water Treatment Plant.

*B. Wastewater Data for Service Area (if applicable)*

1. Percent of water service area served by wastewater system: 43%
2. Monthly volume treated for previous five years (in 1,000 gallons):

<i>Year</i>	<i>2018</i>	<i>2017</i>	<i>2016</i>	<i>2015</i>	<i>2014</i>
<i>Month</i>					
January	<u>214,100</u>	<u>196,690</u>	<u>227,610</u>	<u>174,330</u>	<u>172,420</u>
February	<u>235,340</u>	<u>179,010</u>	<u>191,570</u>	<u>161,920</u>	<u>152,770</u>
March	<u>247,770</u>	<u>189,890</u>	<u>227,300</u>	<u>198,560</u>	<u>169,190</u>
April	<u>223,070</u>	<u>198,870</u>	<u>227,320</u>	<u>207,330</u>	<u>167,110</u>
May	<u>235,750</u>	<u>195,910</u>	<u>233,820</u>	<u>331,470</u>	<u>162,340</u>
June	<u>224,040</u>	<u>214,210</u>	<u>246,000</u>	<u>344,580</u>	<u>155,160</u>
July	<u>225,080</u>	<u>221,920</u>	<u>202,810</u>	<u>237,640</u>	<u>160,210</u>
August	<u>251,750</u>	<u>228,850</u>	<u>197,790</u>	<u>183,300</u>	<u>162,190</u>
September	<u>292,760</u>	<u>201,570</u>	<u>189,760</u>	<u>168,880</u>	<u>154,520</u>
October	<u>389,310</u>	<u>204,140</u>	<u>195,690</u>	<u>194,910</u>	<u>159,610</u>
November	<u>267,000</u>	<u>199,830</u>	<u>192,910</u>	<u>239,130</u>	<u>159,460</u>
December	<u>290,990</u>	<u>218,830</u>	<u>189,120</u>	<u>262,330</u>	<u>165,190</u>
<b>Totals</b>	<u>3,096,960</u>	<u>2,449,720</u>	<u>2,521,700</u>	<u>2,704,380</u>	<u>1,940,170</u>



# District Plants

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Date: 4/18/2019

Author: Mark Stelzel

Document: 20190411MTS1

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## **Appendix C**

Letter to Chairman of Region C Water Planning Group



P.O. Box 305 • Lewisville, TX 75067

(972) 219-1228 • Fax (972) 221-9896

April 29, 2019

Mr. Kevin Ward, Chair  
Region C Water Planning Group  
PO Box 60  
Arlington, TX 76004

**Re: Updated Water Conservation and Drought Contingency Plans**

Dear Mr. Ward, *Kevin*

In accordance with 30 TAC §288.30, enclosed is a copy of Upper Trinity Regional Water District's ("Upper Trinity") 2019 Water Conservation Plan and Drought Contingency Plan. The Board of Directors of Upper Trinity adopted said updated plans on April 11, 2019. The updated Water Conservation Plan includes new 5-year and 10-year water use goals, and more information about certain practices, such as education and outreach efforts. The updated Drought Contingency Plan provides Upper Trinity more flexibility in implementing its drought restrictions, if necessary.

Thank you for your assistance in this matter. Should you have any questions or need further information, please feel free to contact me or Jason Pierce, Manager of Customer Contracts and Support Services, at 972-219-1228.

Sincerely,

A handwritten signature in blue ink that reads "Larry N. Patterson".

Larry N. Patterson  
Executive Director

- Encl: 1. Upper Trinity's 2019 Water Conservation Plan  
2. Upper Trinity's 2019 Drought Contingency Plan

C: Jason Pierce, Manager of Customer Contracts and Support Services, UTRWD

## **Appendix D**

Resolution from Upper Trinity Regional Water District's Board of Directors  
Adopting the Water Conservation Plan



# RESOLUTION

## RESOLUTION # 2019- 02 .

### **A RESOLUTION OF THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT ("THE DISTRICT") ADOPTING UPDATED WATER CONSERVATION AND DROUGHT CONTINGENCY PLANS FOR THE DISTRICT.**

**WHEREAS**, the District's Board of directors adopted its Water Conservation Plans in May 1993, which was later amended in March 2005, April 2009, and in September 2012; and,

**WHEREAS**, the District's Board of directors adopted its Drought Contingency Plan in May 1993, which was later amended in March 2005, April 2009, September 2012, and in April 2016; and,

**WHEREAS**, the Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.5 and Subchapter B, Rule 288.22 governs the development of water conservation and drought contingency plans for wholesale water suppliers and requires wholesale public water suppliers, like the District, to include certain basic provisions in said plans; and,

**WHEREAS**, the Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 and Subchapter B, Rule 288.20 requires that Water Conservation Plans and Drought Contingency Plans be updated every five years; and,

**WHEREAS**, the District desires to update the 2012 Water Conservation Plan and 2016 Drought Contingency Plan based on current knowledge and practices, as well as to enhance the District's Plans by incorporating recommendations from the Texas Water Conservation Advisory Council; and,

**WHEREAS**, the updated Water Conservation Plan and Drought Contingency Plan shall hereinafter be referred to as the "2019 Plans"; and,

**WHEREAS**, the 2019 Plans must be approved by the governing body prior to submission to the Texas Commission on Environmental Quality ("TCEQ"); and,

**WHEREAS**, the Water Conservation Committee of the District has reviewed and hereby recommends the 2019 Plans; and,

**WHEREAS**, the Water Conservation Work Group for the Water System has provided input on said strategies; and,

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT:**

**SECTION 1.** That the 2019 Water Conservation Plan and Drought Contingency Plan as recommended by the Water Conservation Committee and reviewed by the Water Conservation Work Group are hereby adopted.



**SECTION 2.** That the Executive Director is hereby directed to administer and enforce the 2019 Plans as adopted.

**SECTION 3.** That the Executive Director is hereby directed to include provisions in any new contract for wholesale water services and any renewed or extended contract with a Customer after the adoption hereof requiring said Customer to adopt similar water conservation and drought contingency strategies as outlined in the 2019 Plans and providing for enforcement thereof.

**SECTION 4.** That the Executive Director is authorized to submit the 2019 Plans to TCEQ for review and approval and to make reasonable changes thereto if requested by TCEQ.

**SECTION 5.** That this Resolution shall become effective immediately upon its passage.

**DULY PASSED AND APPROVED THIS 11th DAY OF April, 2019.**

Recommended:

  
Larry Patterson, Executive Director

Executed:

  
Kevin Mercer, President

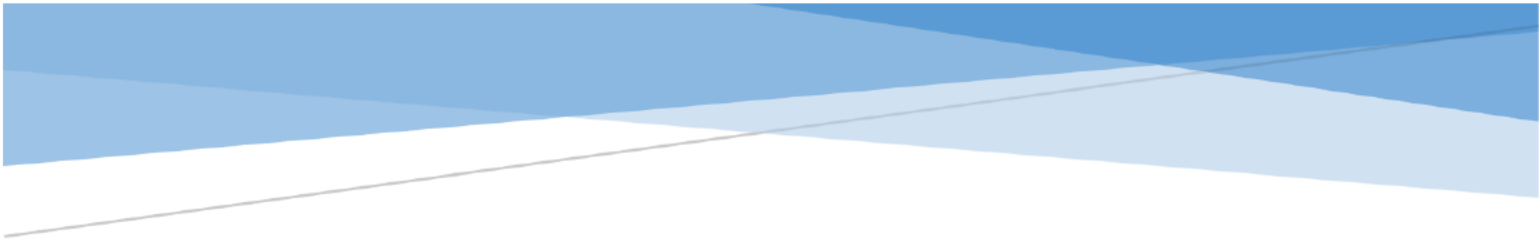
Attest:

  
for Mike Fairfield, Secretary

Rich Lubke  
Vice President



# **Exhibit I**



UPPER TRINITY REGIONAL  
WATER DISTRICT  
Drought Contingency Plan  
Updated May 1, 2019



# UPPER TRINITY REGIONAL WATER DISTRICT

## Drought Contingency Plan *Updated May 2019*

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**SECTION 1**

**Introduction and Objectives**

The purpose of this Drought Contingency Plan (the “Plan”) is to provide drought contingency measures for Upper Trinity Regional Water District (“UTRWD”) as required by the Texas Commission on Environmental Quality (“TCEQ”). Such contingency measures may be needed during drought conditions, during an emergency and when water use approaches the Regional Treated Water System (“System”) supply or the capacity of treatment and delivery facilities. Examples of drought or emergency conditions include low levels of water supply lakes, unusually high water demands, unforeseen equipment / System failure or contamination of the water supply source.

Upper Trinity was created in 1989 by the Texas Legislature to provide treated water service on a wholesale basis to towns, cities, and other water providers. Currently, Upper Trinity provides wholesale treated water service to eighteen members and customers (serving twenty-four communities) in Denton and Collin Counties (herein “Customers”). The overall objective of this Plan is:

- To help assure reliability of water service to Customers;
- To conserve the available water supply in times of drought and emergency;
- To maintain adequate water supplies for domestic use, sanitation, and fire protection;
- To protect and preserve public health, welfare, and safety;
- To minimize the adverse impacts of water supply shortages; and
- To minimize the adverse impacts of emergency conditions affecting water supply.

Upper Trinity developed its original plans for Water Conservation and for Drought Contingency in May 1993, later amended in 2005, 2012, and 2016. This update of the 2016 Drought Contingency Plan has been coordinated with a suggested model drought contingency plan prepared by Upper Trinity for Customers offering retail service; and, is consistent with the latest TCEQ requirements outlined below.

## SECTION 2

### Applicable Rules of Texas Commission on Environmental Quality

TCEQ rules governing development of drought contingency plans for Wholesale Water Suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, and Rule 288.22 of the Texas Administrative Code, as amended. A copy of these rules is contained in Appendix A. The rules define a drought contingency plan as **“A strategy or a combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies”**.

#### Minimum Drought Contingency Plan Requirements

The minimum requirements contained in the Texas Administrative Code for drought contingency plans are covered in this Plan as follows:

<u>Rule</u>	<u>Subject</u>	<u>Section</u>
288.22(a)(1)	Informing the Public & Providing Opportunity For Input	Section 3
288.22(a)(2)	Coordination with the Regional Water Planning Group	Section 10
288.22(a)(3)	Criteria for Initiation & Termination of Stages	Section 6
288.22(a)(4)	Drought and/or Emergency Response Stages	Section 6
288.22(a)(5)	Procedures for Initiation & Termination of Drought Stages	Section 6
288.22(a)(6)	Targets to be Achieved During Drought	Section 6
288.22(a)(7)	Water Supply & Demand Mgm’t Measures for Each Stage	Section 6
288.22(a)(8)	Wholesale Contracts Requiring Water Distribution According to Texas Water Code §11.039	Section 7
288.22(a)(9)	Procedures for Granting Variances	Section 8
288.22(a)(10)	Procedures for Enforcement of Mandatory Restrictions	Section 9
288.22(b)	Notification of Implementation of Mandatory Measures	Section 6
288.22(c)	Review & Update of Plan	Section 11

## **SECTION 3**

### **Public Involvement**

Upper Trinity previously provided opportunity for public input in the development of its updated drought contingency plan by the following means:

- Provided written notice of the draft plan and the opportunity for the public to comment prior to adoption.
- Met with Upper Trinity Customers to discuss the draft plan.
- Provided a copy of the draft plan to anyone requesting a copy.
- Held a public meeting at a time and location convenient to the public and provided written notice to the public concerning the draft plan and meeting.

## **SECTION 4**

### **Provisions for Public Education and Information**

Upper Trinity will provide public information about the Plan at least annually by any of the following means:

- Prepare bulletins / newsletters to Upper Trinity Customers about the Plan;
- Make the Plan and its requirements available on Upper Trinity's website;
- Include information regarding water conservation on Upper Trinity's website, and as part of its bulletins / newsletters, public service announcements, and media reports; and,
- Notify local organizations, schools, and civic groups that Upper Trinity staff members are available to make presentations on the Plan (usually in conjunction with presentations on water conservation programs).

## **SECTION 5**

### **Authorization**

The Executive Director or official designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety and welfare, and to comply with applicable regulations or contractual requirements. Except as otherwise provided in the Plan, the Executive Director or official designee shall have the authority to initiate, to enforce and to terminate the measures provided herein for a drought or other water supply emergency. (The authority to implement and enforce the Plan is established in Resolution No. 2019-02), as provided in Appendix B.

## SECTION 6

### Drought Contingency Response Stages

#### 6.1 Initiation of Drought Response

The Executive Director or official designee may order the implementation of a drought response stage or water emergency for a portion or all of the treated water system when one or more of the trigger conditions for that stage is met as provided in this Plan. The following actions will be taken when a drought response stage is initiated:

- The public will be notified through local media, the Upper Trinity web site, and other appropriate methods as described in Section 4 above;
- Upper Trinity's Customers will be notified by telephone with a follow-up letter, e-mail, or fax to confirm implementation of any drought response stage and to provide relevant details; and
- **Upper Trinity will also notify the Executive Director of the TCEQ within five (5) business days.**

The Executive Director or official designee may decide not to order the implementation of a drought response stage or water emergency even though one or more trigger criteria for the stages are met. Various factors can be taken into account when making a decision about such stages, including circumstances unique to Upper Trinity, the time of the year, weather conditions, the anticipation of replenished water supplies, use of an alternate water resource, or the anticipation that additional facilities will become available on a timely basis to meet needs. The reason for such decision should be documented for the record.

#### 6.2 Termination of a Drought Response Stages

The Executive Director or official designee may order the termination of a drought response stage or water emergency for a portion or all of the treated water system when the conditions for termination are met as provided herein. The following actions will be taken when a drought response stage is terminated:

- The public will be notified through local media, the Upper Trinity web site, and other appropriate methods as described in Section 4 above;
- Upper Trinity's Customers will be notified by telephone with a follow-up letter, e-mail, or fax to confirm the particular drought response stage has been terminated, and
- **Upper Trinity will also notify the Executive Director of the TCEQ within five (5) business days.**

The Executive Director or official designee may decide not to order the termination of a drought response stage or water emergency even though the conditions for termination of the stage are met. Various factors could influence such a decision about whether to end a specific stage, including circumstances unique to Upper Trinity, the time of the year, weather conditions, and conditions within the local water distribution system or anticipation of other relevant factors that



warrant continuation of measures for the drought stage. The reason for such decision should be documented for the record.

### **6.3 Drought and Emergency Response Stages**

#### **A. Stage 1 – Water Watch**

##### Requirements for Initiation

The following are key conditions, any one of which may trigger this stage:

- The total raw water supply in the water supply lakes available to Upper Trinity has dropped below 75% (25% depleted) during the time period from April 1 to October 31; or
- The total raw water supply in the water supply lakes available to Upper Trinity has dropped below 80% (20% depleted) during the time period from November 1 to March 31; or
- Dallas Water Utilities has initiated Stage 1 and given notice to Upper Trinity; or
- Water demand has reached or exceeded 80% of delivery capacity for three consecutive days; or
- Water demand is approaching a level that will cause a reduced delivery capacity for all or part of the transmission system, as determined by Upper Trinity; or
- The Executive Director, with the concurrence of the Upper Trinity Board of Directors, finds that conditions warrant the declaration of Stage 1.

##### Goal

Stage 1 is intended to raise public awareness of potential drought and water emergency problems. The goal for water use reduction under Stage 1 is five percent (5%) of total daily water use that otherwise would have occurred in the absence of drought contingency measures. If circumstances warrant, the Executive Director can set a goal for greater or lesser water use reduction.

##### Water Use Restrictions for Reducing Demand

Specific measures to be implemented during the stage will be determined by the Executive Director or official designee. The Executive Director or official designee may also take other actions not listed, if deemed necessary.

- Request Customers to initiate Stage 1 in their drought contingency plans;

- Outdoor irrigation is limited to no more than two-days-per-week and is mandatory under this Water Watch stage for automatic irrigation systems and hose-end sprinklers. Irrigation of landscaped areas and building foundations is permitted at any time if it is by means of a hand-held hose, drip irrigation or soaker hose systems. Each Customer is responsible for implementing, communicating and enforcing its respective watering schedule for retail customers;
- The time-of-day landscape irrigation schedule included in the water conservation plan becomes mandatory in this stage. No outdoor watering with automatic irrigation systems and hose-end sprinklers can occur from 10:00 a.m. to 6:00 p.m. Irrigation of landscaped areas and building foundations is permitted at any time if it is by means of a hand-held hose, drip irrigation or soaker hose systems.
- Restrict washing of any motor vehicle, motorbike, boat, trailer, airplane or other vehicle to the use of a hand-held bucket or a hand-held hose equipped with a positive shut-off nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash facility or commercial service station. Companies with an automated on-site vehicle washing facility may wash its vehicles at any time.
- All users are encouraged to reduce the frequency of draining and refilling swimming pools.
- Encourage retail customers to avoid waste during recreational use (water used for leisure and entertainment purposes) from faucets, hoses or hydrants.
- Request voluntary reductions in water use by the public and by Customers;
- Increase public education efforts on ways to reduce water use;
- Review the problems that caused the initiation of Stage 1;
- Review operational conditions and capabilities, and intensify efforts on leak detection and repair;
- Except where water is supplied from treated wastewater effluent, reduce internal water use by Upper Trinity by use of one or more of the following means:
  - For landscaped areas, restrict irrigation to two-days-per-week landscape watering schedule;
  - No hosing off paved areas, buildings, windows or other hard surfaces;
  - No vehicle washing except on the premises of a commercial car wash or equivalent facility;
  - No filling or refilling of ornamental fountains and ponds.
- Initiate appropriate elements of City of Dallas measures if conditions related to raw water supply from Dallas are triggered.

### Termination

Stage 1 may be terminated when the circumstances that caused the initiation of Stage 1 no longer prevail.

## **B. Stage 2 – Water Warning**

### Requirements for Initiation

The following are key conditions, any one of which may trigger Stage 2:

- The total raw water supply in the water supply lakes available to Upper Trinity has dropped below 60% (40% depleted) during the time period from April 1 to October 31; or
- The total raw water supply in the water supply lakes available to Upper Trinity has dropped below 65% (35% depleted) during the time period from November 1 to March 31; or
- Dallas Water Utilities has initiated Stage 2 and given notice to Upper Trinity; or
- Water demand has reached or exceeded 85% of delivery capacity for three consecutive days; or
- Water demand has reached a level that is causing a reduced delivery capacity for all or part of the transmission system, as determined by Upper Trinity; or
- The transmission system is unable to deliver water at normal rates due to failure of, or damage to, major water system components; or
- A significant deterioration in the quality of a water supply, being affected by a natural or man-made source; or
- The Executive Director, with the concurrence of the Upper Trinity Board of Directors, finds that conditions warrant the declaration of Stage 2.

### Goal

The goal for water use reduction under Stage 2 is ten percent (10%) of the total daily water use that otherwise would have occurred in the absence of drought contingency measures. If circumstances warrant, the Executive Director can set a goal for greater or lesser water use reduction.

### Water Use Restrictions for Demand Reduction

Specific measures to be implemented during this stage will be determined by the Executive Director or official designee. The Executive Director or official designee may also take other actions not listed, if deemed necessary. All requirements of Stage 1 shall remain in effect during this Stage 2, plus the following incremental or new measures.

- Notify Customers to initiate water demand reductions in accordance with contract obligations and request initiation of Stage 2 in their drought contingency plans. Mandatory reduction measures include:
  - Outdoor irrigation is limited to no more than one-day-per-week and is mandatory under this Water Warning stage for automatic irrigation systems and hose-end sprinklers. This includes irrigation of landscaped areas with automatic irrigation systems and hose-end sprinklers. Irrigation of landscaped areas and building foundations is permitted at any time if it is by means of a hand-held hose, drip irrigation or soaker hose systems.
  - Prohibit recreational water use (water used for leisure and entertainment purposes) including use of faucets or hoses in such a manner that creates runoff or other wastes.
  - All users are encouraged to further reduce the frequency of draining and refilling of swimming pools.
  - Further accelerate public education efforts on ways to reduce water use;
  - Except where water is supplied from treated wastewater effluent, reduce internal water use by Upper Trinity by use of one or more of the following means:
    - For landscaped areas, restrict irrigation to one-day-per-week landscape watering schedule;
    - No hosing off paved areas, buildings, windows or other hard surfaces;
    - No vehicle washing except on the premises of a commercial car wash or equivalent facility;
    - No filling or refilling of ornamental fountains and ponds.
  - High alert for leak detection and repair activities on transmission facilities;
  - Encourage the public to wait until the current drought or water emergency situation has passed before establishing new landscaping;
  - Initiate engineering studies to evaluate alternative actions if conditions worsen.

#### Termination

Stage 2 may terminate when the circumstances that caused the initiation of Stage 2 no longer prevail. Upon termination of Stage 2, Stage 1 will remain in effect, unless otherwise announced by Upper Trinity.

### **C. Stage 3 – Water Emergency**

#### Requirements for Initiation

The following are key conditions, any one of which may trigger Stage 3:

- The total raw water supply in the water supply lakes available to Upper Trinity has dropped below 45% (55% depleted) during the time period from April 1 to October 31; or
- The total raw water supply in the water supply lakes available to Upper Trinity has dropped below 50% (50% depleted) during the time period from November 1 to March 31; or
- Dallas Water Utilities has initiated Stage 3 and given notice to Upper Trinity; or
- Water demand has reached or exceeded 90% of delivery capacity for ~~two~~ three consecutive days; or
- Water demand exceeds the delivery capacity for all or part of the transmission system, as determined by Upper Trinity; or
- The transmission system is unable to deliver water in adequate quantities due to failure of, or damage to, major water system components; or
- Interruption of one or more water supply sources; or
- Natural or man-made contamination of an Upper Trinity water supply source(s) that threatens water availability; or
- The Executive Director, with the concurrence of the Upper Trinity Board of Directors, finds that conditions warrant the declaration of Stage 3.

#### Goal

The goal for water use reduction under Stage 3 is twenty percent (20%) of the total daily water use that otherwise would have occurred in the absence of drought contingency measures. If circumstances warrant, the Executive Director can set a goal for greater or lesser water use reduction.

#### Water Use Restrictions for Reducing Demand

Specific measures to be implemented during this stage will be determined by the Executive Director or official designee. The Executive Director or official designee may also take other actions not listed, if deemed necessary. All requirements of Stages 1 and 2 shall remain in effect during this Stage 3, plus the following incremental or new measures:

- Notify Customers to initiate water demand reductions in accordance with contract obligations and request initiation of Stage 3 in their drought contingency plans. Mandatory reduction measures include:
  - Non-essential water use by Customer substantially restricted same as retail customer;

- Suspend issuance of permits for new swimming pools, hot tubs, spas and ornamental ponds;
  - Step up enforcement activities;
  - Implement a rate surcharge on retail usage.
- Outdoor irrigation is prohibited. Irrigation of trees and building foundations is permitted one day per week and between 6:00 p.m. and 6:00 a.m. if it is by means of a hand-held hose, drip irrigation or soaker hose systems.
- Use of water to wash any motor vehicle, motorbike, boat, trailer or other vehicle not occurring on the premises of a commercial vehicle wash facility or commercial service stations is prohibited. Further, such washing may be exempt from these requirements if the health, safety and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and commercial vehicles used to transport food and perishables.
- Prohibit the filling, draining, and refilling of existing swimming pools, wading pools, Jacuzzis and hot tubs except to maintain structural integrity, proper operation and maintenance or to alleviate a public safety risk. Existing pools may add water to replace losses from normal use and evaporation. Permitting of new swimming pools, wading pools, Jacuzzis and hot tubs is prohibited.
- Hosing and washing of paved areas, buildings, structures, windows or other surfaces is prohibited except by variance and performed by a professional service using high efficiency equipment.
- Prohibit operation of ornamental fountains or ponds that use potable water except where supporting aquatic life or water quality.
- Landscape watering of parks, golf courses, and athletic fields with potable water is prohibited. Exception for golf course greens and tee boxes which may be hand watered as needed. Variances may be granted by the water provider under special circumstances.
- No restrictions on commercial nurseries, construction, patio misters, and for dust abatement.
- Prohibit non-essential internal water use by Upper Trinity, except where water is supplied from treated wastewater effluent. Implement a rate surcharge on retail usage. (**Guidance:** For example, implement a rate surcharge of ten percent (10%) for all water use over the adopted rates. The surcharge could apply to usage in excess of 10,000 gallons per month for all customers.)
- Step-up enforcement activities.
- Implement alternative water supply strategies if available.

### Termination

Stage 3 may terminate when the circumstances that caused the initiation of Stage 3 no longer prevail. Upon termination of Stage 3, Stage 2 will remain in effect, unless otherwise provided by Upper Trinity.

## **SECTION 7**

### **Procedure for Curtailment of Water Supplies**

Any curtailment or rationing of water supply to Customers by Upper Trinity shall be administered in accordance with wholesale service contracts, and with Texas Water Code Section 11.039, which provisions are as follows:

- Sec. 11.039. DISTRIBUTION OF WATER DURING SHORTAGE. (a) If a shortage of water in a water supply not covered by a water conservation plan prepared in compliance with Texas Natural Resource Conservation Commission or Texas Water Development Board rules results from drought, accident, or other cause, the water to be distributed shall be divided among all customers pro rata, according to the amount each may be entitled to, so that preference is given to no one and everyone suffers alike.
- (b) If a shortage of water in a water supply covered by a water conservation plan prepared in compliance with Texas Natural Resource Conservation Commission or Texas Water Development Board rules results from drought, accident, or other cause, the person, association of persons, or corporation owning or controlling the water shall divide the water to be distributed among all customers pro rata, according to:
- (1) the amount of water to which each customer may be entitled; or
  - (2) the amount of water to which each customer may be entitled, less the amount of water the customer would have saved if the customer had operated its water system in compliance with the water conservation plan.
- (c) Nothing in Subsection (a) or (b) precludes the person, association of persons, or corporation owning or controlling the water from supplying water to a person who has a prior vested right to the water under the laws of this state.

In addition, every wholesale water supply contract entered into or renewed after adoption of this Plan, including contract extensions, shall include a provision that water will be distributed in the same manner as provided above during a water shortage resulting from a drought or water emergency.

## SECTION 8

### Variations

The Executive Director or the official designee may grant temporary variations for existing water uses otherwise prohibited under this Plan if one or more of the following conditions are met:

- Failure to grant such a variance would cause an emergency condition adversely affecting health, sanitation, or fire safety for the public or the person requesting the variance;
- Compliance with this Plan cannot be accomplished due to technical or other limitations, and;
- Alternative methods that achieve the same level of reduction in water use can be implemented.

Variations may be granted or denied at the discretion of the Executive Director or the official designee. However, no variations shall be granted, except for extreme case, during Stage 3. All petitions for variations should be in writing and should include the following information:

- Name and address of the owner and a licensed Texas irrigator responsible for the variance;
- Purpose of water use;
- Specific provisions from which relief is requested;
- Detailed statement of the adverse effect of the provision from which relief is requested;
- Description of the relief requested including a proposed irrigation plan;
- Monthly report verifying the goal reductions;
- Period of time for which the variance is sought;
- On-call personnel with contact information for 24-hour a day repair response within one hour of notice;
- Alternative measures that will be taken to reduce water use, and
- Other pertinent information.



## **SECTION 9**

### **Enforcement**

Mandatory water use restrictions may be imposed in Stages 1, 2 and 3 of the Plan. Upper Trinity water contracts include provisions requiring Customers to adopt and enforce drought contingency plans within their retail service area. These contracts also contain provisions for water supply limitations and the control of available water supply and deliverability. Mandatory water use restrictions or water allocations may be enforced by Upper Trinity through Customer rate-of-flow controllers even to the point of discontinuation of service, if necessary.

## **SECTION 10**

### **Coordination with the Regional Water Planning Group and Others**

Upper Trinity will forward the resolution adopting this Plan, along with a copy of said Plan to the Chair of the Region C Water Planning Group. Appendix C includes a copy of the letter sent to the Chair of the Region C Water Planning Group. In addition, copies of the adopted Plan will be sent to the Executive Director of TCEQ and the Executive Administrator of TWDB.

## **SECTION 11**

### **Review and Update of Drought Contingency Plan**

As required by TCEQ rules, Upper Trinity will review this Plan every five years. The Plan will be updated as appropriate based on new or updated information. Should the Plan be revised during any five-year period, an amended plan must be submitted to TCEQ within 90 days of being adopted.

## **APPENDICES**

- |            |  |
|------------|--|
| Appendix A | TCEQ Minimum Requirements of a Drought Contingency Plan – Subchapter B, Rule 288.20              |
| Appendix B | Copy of Resolution Adopted by UTRWD Board of Directors Implementing the Drought Contingency Plan |
| Appendix C | Coordination with Regional Planning Group  |

**APPENDIX A**  
**TCEQ Minimum Requirements of a**  
**Drought Contingency Plan for Wholesale Water Suppliers**  
**(Subchapter B, Rule §288.22)**  
**Effective October 7, 2004**

- (a) A drought contingency plan for a wholesale water supplier must include the following minimum elements.
- (1) Preparation of the plan shall include provisions to actively inform the public and to affirmatively provide opportunity for user input in the preparation of the plan and for informing wholesale customers about the plan. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.
  - (2) The drought contingency plan must document coordination with the regional water planning groups for the service area of the wholesale public water supplier to ensure consistency with the appropriate approved regional water plans.
  - (3) The drought contingency plan must include a description of the information to be monitored by the water supplier and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.
  - (4) The drought contingency plan must include a minimum of three drought or emergency response stages providing for the implementation of measures in response to water supply conditions during a repeat of the drought-of-record.
  - (5) The drought contingency plan must include the procedures to be followed for the initiation or termination of drought response stages, including procedures for notification of wholesale customers regarding the initiation or termination of drought response stages.
  - (6) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this paragraph are not enforceable.
  - (7) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:
    - (A) pro rata curtailment of water deliveries to or diversions by wholesale water customers as provided in Texas Water Code, §11.039; and

(B) utilization of alternative water sources with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).

(8) The drought contingency plan must include a provision in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in case of a shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code, §11.039.

(9) The drought contingency plan must include procedures for granting variances to the plan.

(10) The drought contingency plan must include procedures for the enforcement of any mandatory water use restrictions including specification of penalties (e.g., liquidated damages, water rate surcharges, discontinuation of service) for violations of such restrictions.

(b) The wholesale public water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.

(c) The wholesale public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as adoption or revision of the regional water plan.

**APPENDIX B**  
**Copy of Resolution Adopted by UTRWD Board of Directors**



# RESOLUTION

## RESOLUTION # 2019- 02 .

### **A RESOLUTION OF THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT ("THE DISTRICT") ADOPTING UPDATED WATER CONSERVATION AND DROUGHT CONTINGENCY PLANS FOR THE DISTRICT.**

**WHEREAS**, the District's Board of directors adopted its Water Conservation Plans in May 1993, which was later amended in March 2005, April 2009, and in September 2012; and,

**WHEREAS**, the District's Board of directors adopted its Drought Contingency Plan in May 1993, which was later amended in March 2005, April 2009, September 2012, and in April 2016; and,

**WHEREAS**, the Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.5 and Subchapter B, Rule 288.22 governs the development of water conservation and drought contingency plans for wholesale water suppliers and requires wholesale public water suppliers, like the District, to include certain basic provisions in said plans; and,

**WHEREAS**, the Texas Administrative Code Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 and Subchapter B, Rule 288.20 requires that Water Conservation Plans and Drought Contingency Plans be updated every five years; and,

**WHEREAS**, the District desires to update the 2012 Water Conservation Plan and 2016 Drought Contingency Plan based on current knowledge and practices, as well as to enhance the District's Plans by incorporating recommendations from the Texas Water Conservation Advisory Council; and,

**WHEREAS**, the updated Water Conservation Plan and Drought Contingency Plan shall hereinafter be referred to as the "2019 Plans"; and,

**WHEREAS**, the 2019 Plans must be approved by the governing body prior to submission to the Texas Commission on Environmental Quality ("TCEQ"); and,

**WHEREAS**, the Water Conservation Committee of the District has reviewed and hereby recommends the 2019 Plans; and,

**WHEREAS**, the Water Conservation Work Group for the Water System has provided input on said strategies; and,

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT:**

**SECTION 1.** That the 2019 Water Conservation Plan and Drought Contingency Plan as recommended by the Water Conservation Committee and reviewed by the Water Conservation Work Group are hereby adopted.

**SECTION 2.** That the Executive Director is hereby directed to administer and enforce the 2019 Plans as adopted.

**SECTION 3.** That the Executive Director is hereby directed to include provisions in any new contract for wholesale water services and any renewed or extended contract with a Customer after the adoption hereof requiring said Customer to adopt similar water conservation and drought contingency strategies as outlined in the 2019 Plans and providing for enforcement thereof.

**SECTION 4.** That the Executive Director is authorized to submit the 2019 Plans to TCEQ for review and approval and to make reasonable changes thereto if requested by TCEQ.

**SECTION 5.** That this Resolution shall become effective immediately upon its passage.

**DULY PASSED AND APPROVED THIS 11th DAY OF April, 2019.**

Recommended:

  
Larry Patterson, Executive Director

Executed:

  
Kevin Mercer, President

Attest:

 Rich Lubke  
Vice President  
for Mike Fairfield, Secretary



**APPENDIX C**  
**Coordination with Regional Planning Group**



P.O. Box 305 • Lewisville, TX 75067

(972) 219-1228 • Fax (972) 221-9896

April 29, 2019

Mr. Kevin Ward, Chair  
Region C Water Planning Group  
PO Box 60  
Arlington, TX 76004

**Re: Updated Water Conservation and Drought Contingency Plans**

Dear Mr. Ward, *Kevin*

In accordance with 30 TAC §288.30, enclosed is a copy of Upper Trinity Regional Water District's ("Upper Trinity") 2019 Water Conservation Plan and Drought Contingency Plan. The Board of Directors of Upper Trinity adopted said updated plans on April 11, 2019. The updated Water Conservation Plan includes new 5-year and 10-year water use goals, and more information about certain practices, such as education and outreach efforts. The updated Drought Contingency Plan provides Upper Trinity more flexibility in implementing its drought restrictions, if necessary.

Thank you for your assistance in this matter. Should you have any questions or need further information, please feel free to contact me or Jason Pierce, Manager of Customer Contracts and Support Services, at 972-219-1228.

Sincerely,

A handwritten signature in blue ink that reads "Larry N. Patterson".

Larry N. Patterson  
Executive Director

- Encl: 1. Upper Trinity's 2019 Water Conservation Plan  
2. Upper Trinity's 2019 Drought Contingency Plan

C: Jason Pierce, Manager of Customer Contracts and Support Services, UTRWD















<b>Monitoring Period End Date</b>	<b>Reported Value</b>	<b>Units</b>
5/31/2017	0.21	MGD
6/30/2017	0.249	MGD
7/31/2017	0.203	MGD
8/31/2017	0.201	MGD
9/30/2017	0.187	MGD
10/31/2017	0.195	MGD
11/30/2017	0.186	MGD
12/31/2017	0.209	MGD
1/31/2018	0.197	MGD
2/28/2018	0.296	MGD
3/31/2018	0.277	MGD
4/30/2018	0.239	MGD
5/31/2018	0.249	MGD
6/30/2018	0.185	MGD
7/31/2018	0.182	MGD
8/31/2018	0.161	MGD
9/30/2018	0.279	MGD
10/31/2018	0.38	MGD
11/30/2018	0.266	MGD
12/31/2018	0.313	MGD
1/31/2019	0.338	MGD
2/28/2019	0.288	MGD
3/31/2019	0.337	MGD
4/30/2019	0.361	MGD
5/31/2019	0.502	MGD
6/30/2019	0.35	MGD
7/31/2019	0.214	MGD
8/31/2019	0.261	MGD
9/30/2019	0.229	MGD
10/31/2019	0.165	MGD
11/30/2019	0.108	MGD
12/31/2019	0.108	MGD
1/31/2020	0.26	MGD
2/29/2020	0.29	MGD
3/31/2020	0.374	MGD
4/30/2020	0.306	MGD
5/31/2020	0.255	MGD
6/30/2020	0.166	MGD
7/31/2020	0.087	MGD
8/31/2020	0.067	MGD
9/30/2020	0.108	MGD

10/31/2020	0.177	MGD
11/30/2020	0.174	MGD
12/31/2020	0.176	MGD
1/31/2021	0.219	MGD
2/28/2021	0.217	MGD
3/31/2021	0.234	MGD
4/30/2021	0.232	MGD
5/31/2021	0.398	MGD
6/30/2021	0.347	MGD
7/31/2021	0.247	MGD
8/31/2021	0.242	MGD
9/30/2021	0.193	MGD
10/31/2021	0.187	MGD
11/30/2021	0.204	MGD
12/31/2021	0.185	MGD
1/31/2022	0.186	MGD
2/28/2022	0.2	MGD
3/31/2022	0.19	MGD
4/30/2022	0.222	MGD
5/31/2017	0.25	MGD
6/30/2017	0.536	MGD
7/31/2017	0.468	MGD
8/31/2017	0.45	MGD
9/30/2017	0.241	MGD
10/31/2017	0.237	MGD
11/30/2017	0.249	MGD
12/31/2017	0.425	MGD
1/31/2018	0.228	MGD
2/28/2018	1.038	MGD
3/31/2018	0.777	MGD
4/30/2018	0.298	MGD
5/31/2018	0.414	MGD
6/30/2018	0.263	MGD
7/31/2018	0.256	MGD
8/31/2018	0.512	MGD
9/30/2018	0.917	MGD
10/31/2018	0.876	MGD
11/30/2018	0.457	MGD
12/31/2018	0.78	MGD
1/31/2019	0.677	MGD
2/28/2019	0.344	MGD
3/31/2019	0.666	MGD
4/30/2019	0.624	MGD
5/31/2019	1.052	MGD
6/30/2019	0.749	MGD
7/31/2019	0.415	MGD
8/31/2019	0.38	MGD



9/30/2019	0.443	MGD
10/31/2019	0.387	MGD
11/30/2019	0.219	MGD
12/31/2019	0.281	MGD
1/31/2020	0.438	MGD
2/29/2020	0.633	MGD
3/31/2020	0.754	MGD
4/30/2020	0.423	MGD
5/31/2020	0.593	MGD
6/30/2020	0.294	MGD
7/31/2020	0.231	MGD
8/31/2020	0.111	MGD
9/30/2020	0.402	MGD
10/31/2020	0.282	MGD
11/30/2020	0.255	MGD
12/31/2020	0.268	MGD
1/31/2021	0.535	MGD
2/28/2021	0.373	MGD
3/31/2021	0.386	MGD
4/30/2021	0.513	MGD
5/31/2021	0.752	MGD
6/30/2021	0.727	MGD
7/31/2021	0.396	MGD
8/31/2021	0.655	MGD
9/30/2021	0.242	MGD
10/31/2021	0.293	MGD
11/30/2021	0.293	MGD
12/31/2021	0.272	MGD
1/31/2022	0.216	MGD
2/28/2022	0.245	MGD
3/31/2022	0.232	MGD
4/30/2022	0.406	MGD

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

April 22, 2022

Mr. James Aldredge  
Lloyd Gosselink, Rochelle, and Townsend, PC  
816 Congress Ave, Suite 1900  
Austin, Texas 78701

**VIA E-MAIL**

RE: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Limited Mailed Notice Required  
Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough,  
North Hickory Creek, Hickory Creek, Ranger Branch, tributaries of the Elm Fork  
Trinity River, Elm Fork Trinity River (Lake Lewisville), tributary of the Trinity River,  
Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, Wise Counties

Dear Mr. Aldredge:

This acknowledges receipt, on April 21, 2022, of the applicant's request for an additional extension of time to respond to the Texas Commission on Environmental Quality's revised draft public notice and amendment, dated March 9, 2022.

A 30-day extension is granted until May 25, 2022. If you have any questions concerning this matter, please contact Sarah Henderson via email at [sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov) or by telephone at (512) 239-2535.

Sincerely,

A handwritten signature in cursive script that reads "J. Brooke McGregor".

Brooke McGregor, Manager  
Water Rights Permitting & Availability Section  
Water Availability Division

## Sarah Henderson

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, April 21, 2022 8:33 AM  
**To:** Sarah Henderson  
**Cc:** Kathy Alexander; Brooke McGregor; 'McDonald, Ellen'  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

UTRWD's engineering consultants are working with Kathy to develop an amended application. The process is taking a bit longer than anticipated, so we would like to request an additional 30 day extension of the comment deadline. That should run to May 25, 2022.

Thank you for your consideration of this request.

James

---

**From:** Sarah Henderson <sarah.henderson@tceq.texas.gov>  
**Sent:** Friday, March 25, 2022 12:53 PM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,  
Please find the attached letter in response to your extension request.  
Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, March 24, 2022 1:40 PM  
**To:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Brooke McGregor <[brooke.mcgregor@tceq.texas.gov](mailto:brooke.mcgregor@tceq.texas.gov)>  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Sarah,

Apologies for the one-day delay on this; I was stuck at home all day caring for a sick child. Per a discussion I had with Kathy and Brooke last week, Upper Trinity requests a 30-day extension of the deadline to provide comments on the draft notice and amendment. Please calculate a new deadline, and let me know when that is when you get a chance.

Thanks,  
James

**JAMES ALDREDGE**

Principal

512-322-5859 Direct

512-656-5104 Cell

Lloyd Gosselink Rochelle & Townsend, P.C.

816 Congress Ave., Suite 1900, Austin, TX 78701

[www.lglawfirm.com](http://www.lglawfirm.com) | 512-322-5800

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**From:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Sent:** Wednesday, March 9, 2022 10:47 AM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,

This acknowledges receipt, on February 8, 2022, of the applicants proposed revisions to the referenced draft notice and amendment.

Staff has made the requested changes and a clean copy of the revised drafts are attached for your review.

Any further comments are requested by March 23, 2022.

Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087  
(P) 512.239.2535  
(F) 512.239.4770

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Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

March 25, 2022

Mr. James Aldredge  
Lloyd Gosselink, Rochelle, and Townsend, PC  
816 Congress Ave, Suite 1900  
Austin, Texas 78701

**VIA E-MAIL**

RE: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Limited Mailed Notice Required  
Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough,  
North Hickory Creek, Hickory Creek, Ranger Branch, tributaries of the Elm Fork  
Trinity River, Elm Fork Trinity River (Lake Lewisville), tributary of the Trinity River,  
Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, Wise Counties

Dear Mr. Aldredge:

This acknowledges receipt, on March 24, 2022, of the applicant's request for an extension of time to respond to the Texas Commission on Environmental Quality's revised draft public notice and amendment, dated March 9, 2022.

A 30-day extension is granted until April 25, 2022. If you have any questions concerning this matter, please contact Sarah Henderson via email at [sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov) or by telephone at (512) 239-2535.

Sincerely,

A handwritten signature in cursive script that reads "J. Brooke McGregor".

Brooke McGregor, Manager  
Water Rights Permitting & Availability Section  
Water Availability Division

## Sarah Henderson

---

**From:** James Aldredge <[REDACTED]>  
**Sent:** Thursday, March 24, 2022 1:40 PM  
**To:** Sarah Henderson  
**Cc:** Kathy Alexander; Brooke McGregor  
**Subject:** RE: UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

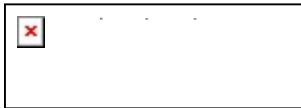
Sarah,

Apologies for the one-day delay on this; I was stuck at home all day caring for a sick child. Per a discussion I had with Kathy and Brooke last week, Upper Trinity requests a 30-day extension of the deadline to provide comments on the draft notice and amendment. Please calculate a new deadline, and let me know when that is when you get a chance.

Thanks,  
James

### JAMES ALDREDGE

Principal  
512-322-5859 Direct  
512-656-5104 Cell  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
www.lglawfirm.com | 512-322-5800  
[OUT NOW! Season Three: Listen In With Lloyd Gosselink Podcast](#)  
[News](#) | [vCard](#) | [LinkedIn](#) | [Bio](#)



---

**From:** Sarah Henderson <sarah.henderson@tceq.texas.gov>  
**Sent:** Wednesday, March 9, 2022 10:47 AM  
**To:** James Aldredge <[REDACTED]>  
**Subject:** UTRWD WRPERM No. 5778A - Revised Draft Notice and Amendment

Mr. Aldredge,

This acknowledges receipt, on February 8, 2022, of the applicants proposed revisions to the referenced draft notice and amendment.

Staff has made the requested changes and a clean copy of the revised drafts are attached for your review.

Any further comments are requested by March 23, 2022.

Sincerely,  
Sarah

Sarah Henderson  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
P.O. Box 13087/MC-160  
Austin, TX 78711-3087

(P) 512.239.2535  
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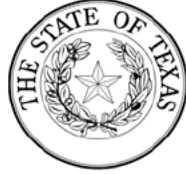
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# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows discharged from the Sandbrock Wastewater Treatment Plant (WWTP) and the City of Krum's WWTP for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 mgd.



The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area.

Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N and Longitude 96.915555 °W, in Denton County, ZIP code 76227.

UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area.

The total volume of return flows from the City of Krum WWTP will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22 and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), tributary of the Trinity River	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 43.2 mgd, for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 identifies specific Wastewater Treatment Plants (WWTPs) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 mgd; and



WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N and Longitude 96.915555 °W in Denton County; and

WHEREAS, UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, the total volume of return flows from the City of Krum WWTP will be discharged, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity River Water District Reuse of Chapman Lake Water - Accounting Plan*) that identifies the sources and volumes of UTRWD's Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. In addition to previous authorizations, Permittee is authorized to use the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed the following amounts of Lake Chapman-derived return flows for municipal and industrial purposes in Permittee's service areas:

1. 16,814.2838 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the Mustang Special Utility District's Sandbrock WWTP, authorized by TPDES Permit No. WQ0015536001.
2. 631.06 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the City of Krum's WWTP, authorized by TPDES Permit No. WQ0010729001, as amended.

B. Permittee's diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

2. DISCHARGE POINTS AND RATES

Return flows under this amendment will be discharged as follows:

- A. The additional 631.06 acre-feet of Lake Chapman-derived return flows will be discharged from the City of Krum's WWTP, at a maximum 2-hour rate of 3.792 cfs (1,702 gpm) (in combination with the previous authorization), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W.
- B. Lake Chapman-derived return flows will be discharged from the Sandbrock WWTP, at a maximum 2-hour rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin being at Latitude 33.269722 °N and Longitude 96.915555 °W.

3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the diversion point and rate specified in Water Use Permit No. 5778.

#### 4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan. This provision supersedes Paragraph 6.F. in Water Use Permit No. 5778.
- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Plan*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this amendment in excess of the amounts currently authorized by TPDES Permit Nos. WQ0015536001 and WQ0010729001, Permittee shall apply for and be granted the right to reuse those return flows.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this

amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

-----  
For the Commission

Date Issued:

DRAFT

## Sarah Henderson

---

**From:** Kathy Alexander  
**Sent:** Monday, March 7, 2022 2:22 PM  
**To:** Sarah Henderson  
**Subject:** FW: UTRWD Application 5778  
**Attachments:** UTRWD\_5778A\_ApplicantDrafts\_6Jan2022\_UTRWDComments-4Feb2022-complete.pdf

See the revised comments.

---

**From:** McDonald, Ellen <[REDACTED]>  
**Sent:** Tuesday, February 8, 2022 11:47 AM  
**To:** Kathy Alexander <kathy.alexander@tceq.texas.gov>  
**Cc:** James T. Aldredge ([REDACTED]) <[REDACTED]>  
**Subject:** RE: UTRWD Application 5778

Kathy,

I've revised our comments per our conversation Friday. Let me know if you have any additional questions. (Note that there are comments associated with the highlighted sections that include the proposed revised text. You should be able to see this if you hover over the highlight with your mouse.)

Thanks,  
Ellen

**Ellen McDonald, PhD., PE**  
*Principal, Water Planning Practice Leader*  
Plummer

**P:** 817.806.1700  
**D:** 817.806.1714  
**C:** 817.907.5370  
[www.plummer.com](http://www.plummer.com)

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**From:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>  
**Sent:** Thursday, February 3, 2022 7:26 AM  
**To:** McDonald, Ellen <[REDACTED]>  
**Subject:** UTRWD Application 5778

Good morning Ellen,

I have a couple of very quick questions about the numbers. Do you have time for a quick call today or tomorrow?  
Hope you are staying safe and warm.

Kathy



Kathy Alexander, Ph.D.  
Policy and Technical Analyst  
Water Availability Division  
Office: 512-239-0778  
Mobile: 512-965-9603



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows discharged from the Sandbrock Wastewater Treatment Plant (WWTP) and the City of Krum's WWTP for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm), for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTP) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 million gallons per day (mgd).

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin and Paragraph 6.F. which limits UTRWD's identification of discharges from the City of Krum and the City of Sanger WWTPs as Lake Chapman-derived return flows.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area.

Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722°N and Longitude 96.915555°W, in Denton County, ZIP code 76227.

UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area.

The increased volume of return flows from the City of Krum WWTP will be discharged, at a maximum rate of 1.085 cfs (486.98 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22 and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville)	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm), for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 identifies specific Wastewater Treatment Plants (WWTP) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 million gallons per day (mgd); and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also includes Paragraph 6.F. which limits UTRWD's identification of discharges from the City of Krum and the City of Sanger WWTPs as Lake Chapman-derived return flows; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N and Longitude 96.915555 °W in Denton County; and

WHEREAS, UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, the increased volume of return flows from the City of Krum WWTP will be discharged, at a maximum rate of 1.085 cfs (486.98 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity River Water District Reuse of Chapman Lake Water – Accounting Plan*) that identifies the sources and volumes of UTWD’s Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. In addition to previous authorizations, Permittee is authorized to use the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed the following amounts of Lake Chapman-derived return flows for municipal and industrial purposes in Permittee’s service areas:

1. 16,814.2838 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the Mustang Special Utility District’s Sandbrock WWTP, authorized by TPDES Permit No. WQ0015536001.
2. 631.06 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the City of Krum’s WWTP, authorized by TPDES Permit No. WQ0010729001, as amended.

B. Permittee’s diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

2. DISCHARGE POINTS AND RATES

Return flows under this amendment will be discharged as follows:

- A. The additional 631.06 acre-feet of Lake Chapman-derived return flows will be discharged from the City of Krum’s WWTP, at a maximum rate of 1.085 cfs (486.98 gpm) (in combination with the previous authorization), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W.
- B. Lake Chapman-derived return flows will be discharged from the Sandbrock WWTP, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin being at Latitude 33.269722 °N and Longitude 96.915555 °W.

3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the



diversion point and rate specified in Water Use Permit No. 5778.

#### 4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan.
- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water - Accounting Plan*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this amendment in excess of the amounts currently authorized by TPDES Permit Nos. WQ0015536001 and WQ0010729001, Permittee shall apply for and be granted the right to reuse those return flows.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

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For the Commission

Date Issued:

DRAFT



# Texas Commission on Environmental Quality

## INTEROFFICE MEMORANDUM

**To:** Sarah Henderson, Project Manager  
Water Rights Permitting Team

**Date:** September 20, 2021

**Through:** Jason Godeaux, Team Leader  
Resource Protection Team

Kristin Wang, Senior Water Conservation Specialist  
Resource Protection Team

**From:** Jennifer Allis, Senior Water Conservation Specialist  
Resource Protection Team

**Subject:** Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

### APPLICATION SUMMARY

Water Use Permit No. 5778 (Permit) authorizes the Upper Trinity Regional Water District (UTRWD) to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of Lake Chapman-derived return flows (authorized by Certificate of Adjudication No. 03-4797) per year or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses, for subsequent diversion from the Joint Lewisville/UTRWD Intake Structure on Lake Lewisville at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm) for municipal and industrial uses in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant counties.

UTRWD requests to amend the Permit to add 15 MGD (16,814.2838 acre-feet per year) of surface water-based return flows, discharged from the Sandbrock Wastewater Treatment Plant (WWTP), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0015536001. UTRWD also requests to increase the amount of surface water-based return flows authorized for reuse from the City of Krum's WWTP, authorized under TPDES Permit No. WQ0010729001, from 0.137 MGD (153.61 acre-feet per year) to 0.7 MGD (784.67 acre-feet per

year). UTRWD does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse in the Permit (up to 9,664 acre-feet per year) but to identify additional discharges to support the reuse authorization.

UTRWD also requests authorization to use the bed and banks of Hickory Creek, Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

### **WATER CONSERVATION REVIEW**

Pursuant to Title 30 Texas Administrative Code §295.9, water conservation and drought contingency plans are not required to be submitted for this application.

The application is consistent with the 2021 Region C Water Plan and the 2022 State Water Plan because there is nothing in the water plans that conflicts with issuing this proposed amendment.

### **RECOMMENDATIONS**

Resource Protection Staff have no recommendations regarding the proposed amendment, if granted.


# Texas Commission on Environmental Quality


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## INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager  
Water Rights Permitting Team

Date: September 20, 2021

Through:  Jason Godeaux, Team Leader  
Resource Protection Team

From:  Kenneth Coonrod, Aquatic Scientist  
Resource Protection Team

Subject: Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

Environmental reviews of water right applications are conducted in accordance with applicable provisions of the Texas Water Code (TWC) and the administrative rules of the Texas Commission on Environmental Quality (TCEQ). The provisions applicable to environmental reviews can vary according to the type and the location of the authorization requested.

### **APPLICATION SUMMARY**

Water Use Permit No. 5778 (Permit) authorizes the Upper Trinity Regional Water District (UTRWD) to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of Lake Chapman-derived return flows (authorized by Certificate of Adjudication No. 03-4797) per year or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses, for subsequent diversion from the Joint Lewisville/UTRWD Intake Structure on Lake Lewisville at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm) for municipal and industrial uses in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant counties.

UTRWD requests to amend the Permit to add 15 MGD (16,814.2838 acre-feet per year) of surface water-based return flows, discharged from the Sandbrock Wastewater Treatment Plant (WWTP), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0015536001. UTRWD also requests to increase the amount of surface water-based return flows authorized for reuse from the City of Krum's WWTP, authorized under TPDES Permit No. WQ0010729001,

from 0.137 MGD (153.61 acre-feet per year) to 0.7 MGD (784.67 acre-feet per year). UTRWD does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse in the Permit (up to 9,664 acre-feet per year) but to identify additional discharges to support the reuse authorization.

UTRWD also requests authorization to use the bed and banks of Hickory Creek, Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

## ENVIRONMENTAL ANALYSIS

**Aquatic and Riparian Habitats:** UTRWD's proposed bed and banks project is located on Hickory Creek, a perennial stream, which traverses the Grand Prairie and Eastern Cross Timbers ecoregions (Griffith et al. 2007).

The checklist for the Trinity River Basin identified 52 species of ichthyofauna occurring within the Elm Fork Trinity hydrologic unit (United States Geological Survey hydrologic code 12030103) (Hendrickson and Cohen 2015). The sandbank pocketbook (*Lampsilis satura*), the Louisiana pigtoe (*Pleurobema riddellii*), and the Texas heelsplitter (*Potamilus amphichaenus*), high-interest aquatic species, are known to occur in Denton County (TPWD 2015). The request to use the bed and banks of Hickory Creek is not expected to have an effect on any high-interest aquatic species, because no additional state water is being requested by UTRWD.

On April 20, 2011, the TCEQ adopted environmental flow standards for the Trinity and San Jacinto Rivers, and Galveston Bay (Title 30 Texas Administrative Code (TAC) Chapter 298 Subchapter B). These environmental flow standards are considered adequate to support a sound ecological environment (Title 30 TAC §298.10). UTRWD's request to use the bed and banks of Hickory Creek is not a new appropriation of water or an amendment that increases the amount of water stored, taken or diverted; therefore, the environmental flow standards do not apply. UTRWD proposes to use the bed and banks of Hickory Creek to deliver water to its customers. UTRWD's request is not expected to adversely impact aquatic and riparian habitats in the area.

**Recreational Uses:** Hickory Creek has a presumed primary contact recreation 1 use (TCEQ 2018). UTRWD's request should not adversely impact recreational uses.

**Water Quality:** Hickory Creek has a presumed high aquatic life use (TCEQ 2018). UTRWD's request should not adversely impact water quality.

**Freshwater Inflows:** Freshwater inflows are critical for maintaining the historical productivity of bays and estuaries along the Gulf Coast. The proposed project is located more than 200 river miles from the Gulf of Mexico. The application does not request a new appropriation of water; therefore, UTRWD's request should not have any impact to Galveston Bay.

## **RECOMMENDATIONS**

Resource Protection staff have no recommendations regarding this proposed amendment, if granted.

## **LITERATURE CITED**

Griffith GE, Bryce SA, Omernik JM, Rogers AC. 2007. Ecoregions of Texas - Project Report to Texas Commission on Environmental Quality. Reston (VA): U.S. Geological Survey. Report No.: AS-199. 125p.

Hendrickson DA, Cohen AE. 2015. Fishes of Texas Project Database [Internet]. [cited 2021 Aug 7]; Version 2.0. Available from <http://www.fishesoftexas.org/home/> doi:10.17603/C3WC70

TCEQ. 2018. Texas Surface Water Quality Standards §§307.1-307.10. Austin (TX): Texas Commission on Environmental Quality.

TPWD. 2015. Rare, Threatened, and Endangered Species of Texas by County [Internet]. Austin (TX): Denton County, revised June 22, 2021. [cited 2021 Aug 7]. Available from <http://tpwd.texas.gov/gis/rtest/>.



UTRWD also requests authorization to use the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork Trinity River (Lake Lewisville) Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

UTRWD submitted an accounting plan on August 30, 2017. The accounting plan was subsequently reviewed, and a final version was submitted on April 27, 2021.

The application was declared administratively complete on August 9, 2018.

## **Hydrology Review**

Resource Protection Staff did not recommend that the application be subject to instream flow requirements. See Resource Protection staff's September 20, 2021 memorandum.

Regarding the request to use the bed and banks of the Little Elm Creek, North Hickory Creek, and Hickory Creek to convey surface water-based return flows, the application included the information required in 30 Texas Administrative Code (TAC) §295.113. UTRWD indicates that the surface water-based return flows originate from an interbasin transfer (IBT) of water from Lake Chapman (Cooper Reservoir) in the Sulphur River Basin.

Staff reviewed current discharge information from the City of Krum's WWTP and determined that the current discharges were less than the amount currently authorized for reuse under Water Use Permit 5778. In evaluating whether UTRWDs requested amendment to the permit would affect senior water rights, staff notes that no water rights can be affected because no water rights have been granted based on the additional discharges.

UTRWD submitted an accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables*) that accounts for the discharge and diversion of return flows under the permit, as amended. Staff reviewed the accounting plan and found it to be acceptable. Maintenance of the accounting plan should ensure that only discharged return flows are diverted so senior water rights are protected.

## **Conclusion**

Staff can support granting the application provided the following special conditions be included in the amendment:

1. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in quantities and qualities sufficient to fully satisfy the amendment. Should the discharges

- become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
2. Permittee shall only divert daily surface water-based return flows that are actually discharged.
  3. Permittee shall only divert and use return flows pursuant to Paragraph 1. USE and Paragraph 3. DIVERSION in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive Director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
  4. Prior to diversion and reuse of any return flows in excess of the amounts currently authorized by TPDES Permit Nos. WQ0015536001 and WQ0010729001, Permittee shall apply for and be granted the right to reuse those return flows.

*Andrew Garcia*

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Andrew Garcia, Hydrologist



## Sarah Henderson

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**From:** James Aldredge <[REDACTED]>  
**Sent:** Wednesday, January 26, 2022 1:52 PM  
**To:** Kathy Alexander; Brooke McGregor  
**Cc:** Sarah Henderson  
**Subject:** RE: WRPERM 5778A Draft Amendment  
**Attachments:** UTRWD\_5778A\_ApplicantDrafts\_6Jan2022\_UTRWDComments.PDF

Kathy,

Apologies for the delay in getting our comments completed. And, again, sincere thanks for your time in discussing this. See the attached draft permit and notice with UTRWD's comments in red. If you need to discuss anything, I will be happy to coordinate a follow-up meeting with Plummer.

Thanks,  
James

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**From:** Kathy Alexander <kathy.alexander@tceq.texas.gov>  
**Sent:** Friday, January 21, 2022 8:47 AM  
**To:** James Aldredge <[REDACTED]>; Brooke McGregor <brooke.mcgregor@tceq.texas.gov>  
**Cc:** Sarah Henderson <sarah.henderson@tceq.texas.gov>  
**Subject:** RE: WRPERM 5778A Draft Amendment

James,  
We are fine with extending the deadline until Tuesday January 25. I'm pretty open on Monday for a quick call.  
Kathy



Kathy Alexander, Ph.D.  
Policy and Technical Analyst  
Water Availability Division  
Office: 512-239-0778  
Mobile: 512-965-9603

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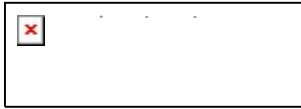
**From:** James Aldredge <[REDACTED]>  
**Sent:** Friday, January 21, 2022 7:40 AM  
**To:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>  
**Cc:** Sarah Henderson <[sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov)>  
**Subject:** WRPERM 5778A Draft Amendment

Kathy, apologies for the late notice, but per our conversation Wednesday afternoon, I need to request an extension of yesterday's deadline for UTRWD to file comments on the draft amendment. The folks at Plummer want to think through the discharge rate issue a bit more. And it may be something that we all need to get on the phone to discuss. Ellen still has some misgivings about the expression of the "maximum rate" in cfs as opposed to MGD. But, of course, the overarching concern for UTRWD is not altering the numbers in the draft in a way that would require additional technical review.

If you wouldn't mind extending the deadline to next Tuesday, January 25, we would greatly appreciate it. Also, do you have availability Monday for a quick videoconference to discuss if necessary?

Thanks and have a nice weekend.

James



**JAMES ALDREDGE**

Principal

512-322-5859 Direct

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# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows discharged from the Sandbrock Wastewater Treatment Plant (WWTP) and the City of Krum's WWTP for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm), for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTP) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 million gallons per day (mgd).

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin and Paragraph 6.F. which limits UTRWD's identification of discharges from the City of Krum and the City of Sanger WWTPs as Lake Chapman-derived return flows.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area.

Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722°N and Longitude 96.915555°W, in Denton County, ZIP code 76227.

UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area.

The increased volume of return flows from the City of Krum WWTP will be discharged, at a maximum rate of 1.085 cfs (486.98 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22 and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## AMENDMENT TO A WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville)	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm), for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 identifies specific Wastewater Treatment Plants (WWTP) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 million gallons per day (mgd); and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also includes Paragraph 6.F. which limits UTRWD's identification of discharges from the City of Krum and the City of Sanger WWTPs as Lake Chapman-derived return flows; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N and Longitude 96.915555 °W in Denton County; and

WHEREAS, UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, the increased volume of return flows from the City of Krum WWTP will be discharged, at a maximum rate of 1.085 cfs (486.98 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and

WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity River Water District Reuse of Chapman Lake Water – Accounting Plan*) that identifies the sources and volumes of UTWD’s Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. In addition to previous authorizations, Permittee is authorized to use the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed the following amounts of Lake Chapman-derived return flows for municipal and industrial purposes in Permittee’s service areas:

1. 16,814.2838 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the Mustang Special Utility District’s Sandbrock WWTP, authorized by TPDES Permit No. WQ0015536001.
2. 631.06 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the City of Krum’s WWTP, authorized by TPDES Permit No. WQ0010729001, as amended.

B. Permittee’s diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

2. DISCHARGE POINTS AND RATES

Return flows under this amendment will be discharged as follows:

- A. The additional 631.06 acre-feet of Lake Chapman-derived return flows will be discharged from the City of Krum’s WWTP, at a maximum rate of 1.085 cfs (486.98 gpm) (in combination with the previous authorization), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W.
- B. Lake Chapman-derived return flows will be discharged from the Sandbrock WWTP, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin being at Latitude 33.269722 °N and Longitude 96.915555 °W.

3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the



diversion point and rate specified in Water Use Permit No. 5778.

#### 4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan.
- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water - Accounting Plan*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this amendment in excess of the amounts currently authorized by TPDES Permit Nos. WQ0015536001 and WQ0010729001, Permittee shall apply for and be granted the right to reuse those return flows.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

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For the Commission

Date Issued:

DRAFT

# Texas Commission on Environmental Quality

## INTEROFFICE MEMORANDUM

**To:** Sarah Henderson, Project Manager  
Water Rights Permitting Team

**Date:** September 20, 2021

**Through:** Jason Godeaux, Team Leader  
Resource Protection Team

Kristin Wang, Senior Water Conservation Specialist  
Resource Protection Team

**From:** Jennifer Allis, Senior Water Conservation Specialist  
Resource Protection Team

**Subject:** Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

### APPLICATION SUMMARY

Water Use Permit No. 5778 (Permit) authorizes the Upper Trinity Regional Water District (UTRWD) to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of Lake Chapman-derived return flows (authorized by Certificate of Adjudication No. 03-4797) per year or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses, for subsequent diversion from the Joint Lewisville/UTRWD Intake Structure on Lake Lewisville at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm) for municipal and industrial uses in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant counties.

UTRWD requests to amend the Permit to add 15 MGD (16,814.2838 acre-feet per year) of surface water-based return flows, discharged from the Sandbrock Wastewater Treatment Plant (WWTP), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0015536001. UTRWD also requests to increase the amount of surface water-based return flows authorized for reuse from the City of Krum's WWTP, authorized under TPDES Permit No. WQ0010729001, from 0.137 MGD (153.61 acre-feet per year) to 0.7 MGD (784.67 acre-feet per

year). UTRWD does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse in the Permit (up to 9,664 acre-feet per year) but to identify additional discharges to support the reuse authorization.

UTRWD also requests authorization to use the bed and banks of Hickory Creek, Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

### **WATER CONSERVATION REVIEW**

Pursuant to Title 30 Texas Administrative Code §295.9, water conservation and drought contingency plans are not required to be submitted for this application.

The application is consistent with the 2021 Region C Water Plan and the 2022 State Water Plan because there is nothing in the water plans that conflicts with issuing this proposed amendment.

### **RECOMMENDATIONS**

Resource Protection Staff have no recommendations regarding the proposed amendment, if granted.


# Texas Commission on Environmental Quality


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## INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager  
Water Rights Permitting Team

Date: September 20, 2021

Through:  Jason Godeaux, Team Leader  
Resource Protection Team

From:  Kenneth Coonrod, Aquatic Scientist  
Resource Protection Team

Subject: Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

Environmental reviews of water right applications are conducted in accordance with applicable provisions of the Texas Water Code (TWC) and the administrative rules of the Texas Commission on Environmental Quality (TCEQ). The provisions applicable to environmental reviews can vary according to the type and the location of the authorization requested.

### **APPLICATION SUMMARY**

Water Use Permit No. 5778 (Permit) authorizes the Upper Trinity Regional Water District (UTRWD) to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of Lake Chapman-derived return flows (authorized by Certificate of Adjudication No. 03-4797) per year or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses, for subsequent diversion from the Joint Lewisville/UTRWD Intake Structure on Lake Lewisville at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm) for municipal and industrial uses in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant counties.

UTRWD requests to amend the Permit to add 15 MGD (16,814.2838 acre-feet per year) of surface water-based return flows, discharged from the Sandbrock Wastewater Treatment Plant (WWTP), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0015536001. UTRWD also requests to increase the amount of surface water-based return flows authorized for reuse from the City of Krum's WWTP, authorized under TPDES Permit No. WQ0010729001,

from 0.137 MGD (153.61 acre-feet per year) to 0.7 MGD (784.67 acre-feet per year). UTRWD does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse in the Permit (up to 9,664 acre-feet per year) but to identify additional discharges to support the reuse authorization.

UTRWD also requests authorization to use the bed and banks of Hickory Creek, Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

## ENVIRONMENTAL ANALYSIS

**Aquatic and Riparian Habitats:** UTRWD's proposed bed and banks project is located on Hickory Creek, a perennial stream, which traverses the Grand Prairie and Eastern Cross Timbers ecoregions (Griffith et al. 2007).

The checklist for the Trinity River Basin identified 52 species of ichthyofauna occurring within the Elm Fork Trinity hydrologic unit (United States Geological Survey hydrologic code 12030103) (Hendrickson and Cohen 2015). The sandbank pocketbook (*Lampsilis satura*), the Louisiana pigtoe (*Pleurobema riddellii*), and the Texas heelsplitter (*Potamilus amphichaenus*), high-interest aquatic species, are known to occur in Denton County (TPWD 2015). The request to use the bed and banks of Hickory Creek is not expected to have an effect on any high-interest aquatic species, because no additional state water is being requested by UTRWD.

On April 20, 2011, the TCEQ adopted environmental flow standards for the Trinity and San Jacinto Rivers, and Galveston Bay (Title 30 Texas Administrative Code (TAC) Chapter 298 Subchapter B). These environmental flow standards are considered adequate to support a sound ecological environment (Title 30 TAC §298.10). UTRWD's request to use the bed and banks of Hickory Creek is not a new appropriation of water or an amendment that increases the amount of water stored, taken or diverted; therefore, the environmental flow standards do not apply. UTRWD proposes to use the bed and banks of Hickory Creek to deliver water to its customers. UTRWD's request is not expected to adversely impact aquatic and riparian habitats in the area.

**Recreational Uses:** Hickory Creek has a presumed primary contact recreation 1 use (TCEQ 2018). UTRWD's request should not adversely impact recreational uses.

**Water Quality:** Hickory Creek has a presumed high aquatic life use (TCEQ 2018). UTRWD's request should not adversely impact water quality.

**Freshwater Inflows:** Freshwater inflows are critical for maintaining the historical productivity of bays and estuaries along the Gulf Coast. The proposed project is located more than 200 river miles from the Gulf of Mexico. The application does not request a new appropriation of water; therefore, UTRWD's request should not have any impact to Galveston Bay.

## **RECOMMENDATIONS**

Resource Protection staff have no recommendations regarding this proposed amendment, if granted.

## **LITERATURE CITED**

Griffith GE, Bryce SA, Omernik JM, Rogers AC. 2007. Ecoregions of Texas - Project Report to Texas Commission on Environmental Quality. Reston (VA): U.S. Geological Survey. Report No.: AS-199. 125p.

Hendrickson DA, Cohen AE. 2015. Fishes of Texas Project Database [Internet]. [cited 2021 Aug 7]; Version 2.0. Available from <http://www.fishesoftexas.org/home/> doi:10.17603/C3WC70

TCEQ. 2018. Texas Surface Water Quality Standards §§307.1-307.10. Austin (TX): Texas Commission on Environmental Quality.

TPWD. 2015. Rare, Threatened, and Endangered Species of Texas by County [Internet]. Austin (TX): Denton County, revised June 22, 2021. [cited 2021 Aug 7]. Available from <http://tpwd.texas.gov/gis/rtest/>.





UTRWD also requests authorization to use the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork Trinity River (Lake Lewisville) Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

UTRWD submitted an accounting plan on August 30, 2017. The accounting plan was subsequently reviewed, and a final version was submitted on April 27, 2021.

The application was declared administratively complete on August 9, 2018.

## **Hydrology Review**

Resource Protection Staff did not recommend that the application be subject to instream flow requirements. See Resource Protection staff's September 20, 2021 memorandum.

Regarding the request to use the bed and banks of the Little Elm Creek, North Hickory Creek, and Hickory Creek to convey surface water-based return flows, the application included the information required in 30 Texas Administrative Code (TAC) §295.113. UTRWD indicates that the surface water-based return flows originate from an interbasin transfer (IBT) of water from Lake Chapman (Cooper Reservoir) in the Sulphur River Basin.

Staff reviewed current discharge information from the City of Krum's WWTP and determined that the current discharges were less than the amount currently authorized for reuse under Water Use Permit 5778. In evaluating whether UTRWDs requested amendment to the permit would affect senior water rights, staff notes that no water rights can be affected because no water rights have been granted based on the additional discharges.

UTRWD submitted an accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables*) that accounts for the discharge and diversion of return flows under the permit, as amended. Staff reviewed the accounting plan and found it to be acceptable. Maintenance of the accounting plan should ensure that only discharged return flows are diverted so senior water rights are protected.

## **Conclusion**

Staff can support granting the application provided the following special conditions be included in the amendment:

1. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in quantities and qualities sufficient to fully satisfy the amendment. Should the discharges

- become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
2. Permittee shall only divert daily surface water-based return flows that are actually discharged.
  3. Permittee shall only divert and use return flows pursuant to Paragraph 1. USE and Paragraph 3. DIVERSION in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive Director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
  4. Prior to diversion and reuse of any return flows in excess of the amounts currently authorized by TPDES Permit Nos. WQ0015536001 and WQ0010729001, Permittee shall apply for and be granted the right to reuse those return flows.

*Andrew Garcia*

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Andrew Garcia, Hydrologist

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Toby Baker, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

January 6, 2022

Mr. James Aldredge  
Lloyd Gosselink, Rochelle, and Townsend, PC  
816 Congress Ave, Suite 1900  
Austin, Texas 78701

**VIA E-MAIL**

RE: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Limited Mailed Notice Required  
Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough,  
North Hickory Creek, Hickory Creek, Ranger Branch, tributaries of the Elm Fork  
Trinity River, Elm Fork Trinity River (Lake Lewisville), tributary of the Trinity River,  
Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, Wise Counties

Dear Mr. Aldredge:

Drafts, subject to revision, of the public notice, proposed amendment to Water Use Permit No. 5778, and the related technical memoranda are attached.

Staff is recommending that the referenced application be granted in accordance with the enclosed drafts. Please review the drafts and contact me no later than January 20, 2022 with any comments or questions as the notice will be forwarded to the Office of the Chief Clerk for mailing after that date.

Please note this application requires a 30-day comment period, and once the comment period has closed, the proposed amendment to Water Use Permit No. 5778 may be issued as drafted given no comments and or hearing requests are received.

If you have questions concerning this application, please contact Sarah Henderson via e-mail at [sarah.henderson@tceq.texas.gov](mailto:sarah.henderson@tceq.texas.gov) or by phone at 512-239-2535.

Sincerely,

*Sarah Henderson*

Sarah Henderson, Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Attachments

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION TO AMEND A WATER USE PERMIT

### APPLICATION NO. 5778A

Upper Trinity Regional Water District seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey additional Lake Chapman-derived return flows discharged from the Sandbrock Wastewater Treatment Plant (WWTP) and the City of Krum's WWTP for subsequent diversion and reuse for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin. The application does not request to increase the total volume of Lake Chapman-derived return flows available for reuse or to increase the maximum rate of diversion. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** Upper Trinity Regional Water District, P.O. Box 305, Lewisville, Texas 75067, Applicant, has applied to the Texas Commission on Environmental Quality (TCEQ) to amend Water Use Permit No. 5778 pursuant to Texas Water Code (TWC) §§ 11.122, 11.042 and TCEQ Rules Title 30 Texas Administrative Code (TAC) §§ 295.1, et seq. Notice is being mailed to the downstream water rights holders of record in the Trinity River Basin pursuant to Title 30 TAC § 295.161(a).

Water Use Permit No. 5778 (Permit) authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan.

The Permit authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm), for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin.

The Permit also identifies specific Wastewater Treatment Plants (WWTP) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 million gallons per day (mgd).

The time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin.

The Permit includes Paragraphs 6.A. – 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin and Paragraph 6.F. which limits UTRWD's identification of discharges from the City of Krum and the City of Sanger WWTPs as Lake Chapman-derived return flows.

UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area.

Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722°N and Longitude 96.915555°W, in Denton County, ZIP code 76227.

UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area.

The increased volume of return flows from the City of Krum WWTP will be discharged, at a maximum rate of 1.085 cfs (486.98 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County, ZIP Code 76249.

The additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778.

UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778.

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22 and July 20, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 9, 2018.

The Executive Director has completed the technical review of the application and prepared a draft amendment. The draft amendment, if granted, would include special conditions, including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft amendment are available for viewing on the TCEQ web page at: [https://www.tceq.texas.gov/permitting/water\\_rights/wr-permitting/view-wr-pend-apps](https://www.tceq.texas.gov/permitting/water_rights/wr-permitting/view-wr-pend-apps).

Alternatively, you may request a copy of the documents by contacting the TCEQ Office of the Chief Clerk by phone at (512) 239-3300 or by mail at TCEQ OCC, Notice Team (MC-105), P.O. Box 13087, Austin, Texas 78711.

**PUBLIC COMMENT / PUBLIC MEETING.** Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, at the address provided in the information section below, by \_\_\_\_\_. A public meeting is intended for the taking of public comment and is not a contested case hearing. A public meeting will be held if the Executive Director determines that there is a significant degree of public interest in the application.

**CONTESTED CASE HEARING.** The TCEQ may grant a contested case hearing on this application if a written hearing request is filed by \_\_\_\_\_. The Executive Director may approve the application unless a written request for a contested case hearing is filed by \_\_\_\_\_.

To request a contested case hearing, you must submit the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "[I/we] request a contested case hearing;" (4) a brief and specific description of how you would be affected by the application in a way not common to the general public; and (5) the location and distance of your property relative to the proposed activity. You may also submit proposed conditions for the requested permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing to the Office of the Chief Clerk at the address provided in the information section below.

If a hearing request is filed, the Executive Director will not issue the permit and will forward the application and hearing request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

**INFORMATION.** Written hearing requests, public comments or requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at <https://www14.tceq.texas.gov/epic/eComment/> by entering WRPERM 5778 in the search field. For information concerning the hearing process, please contact the Public Interest Counsel, MC 103, at the same address.

For additional information, individual members of the general public may contact the Public Education Program at 1-800-687-4040. General information regarding the TCEQ can be found at our web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). Si desea información en Español, puede llamar al 1-800-687-4040 o por el internet al <http://www.tceq.texas.gov>.

Issued:



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AMENDMENT TO A  
WATER USE PERMIT

PERMIT NO. 5778A		TYPE:	§§ 11.122, 11.042
Permittee:	Upper Trinity Regional Water District	Address:	P.O. Box 305 Lewisville, Texas 75067
Filed:	August 9, 2018	Granted:	
Purposes:	Municipal and Industrial	Counties:	Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant
Watercourses:	Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville)	Watershed:	Trinity River Basin

WHEREAS, Water Use Permit No. 5778 authorizes Upper Trinity Regional Water District (UTRWD), Permittee, to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797), or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to its approved accounting plan; and

WHEREAS, Water Use Permit No. 5778 authorizes the subsequent diversion of UTRWD's Lake Chapman-derived return flows from the existing Joint Lewisville/UTRWD Intake Structure on Lake Lewisville, at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm), for municipal and industrial purposes in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant counties, Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 identifies specific Wastewater Treatment Plants (WWTP) that discharge the Lake Chapman-derived return flows UTRWD is authorized to reuse, including the City of Krum's WWTP, authorized by Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010729001 with a discharge of 0.137 million gallons per day (mgd); and

WHEREAS, the time priority for the bed and banks authorization is May 28, 2002; however, the return flow generated from the Lake Chapman water conveyed from the Sulphur River Basin to the Trinity River Basin is not subject to priority calls by senior and superior water rights holders in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 includes Paragraphs 6.A. - 6.D. which describe contracts and agreements governing the diversion of water from Lake Chapman in the Sulphur River Basin and reuse of Lake Chapman-derived return flows in the Trinity River Basin; and

WHEREAS, Water Use Permit No. 5778 also includes Paragraph 6.F. which limits UTRWD's identification of discharges from the City of Krum and the City of Sanger WWTPs as Lake Chapman-derived return flows; and

WHEREAS, UTRWD seeks to amend Water Use Permit No. 5778 to authorize the use of the bed and banks of Little Elm Creek and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed 16,814.2838 acre-feet per year (15.0 mgd) of its Lake Chapman-derived return flows authorized to be discharged by Mustang Special Utility District under TPDES Permit No. WQ0015536001 (Sandbrock WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, Lake Chapman-derived return flows from Sandbrock WWTP will be discharged, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin located at Latitude 33.269722 °N and Longitude 96.915555 °W in Denton County; and

WHEREAS, UTRWD also seeks to use the bed and banks of North Hickory Creek, Hickory Creek and the Elm Fork Trinity River (Lake Lewisville) to convey an additional 631.06 acre-feet per year (0.563 mgd) of its Lake Chapman-derived return flows, authorized to be discharged by the City of Krum under TPDES Permit No. WQ0010729001, as amended (City of Krum WWTP), for municipal and industrial purposes within UTRWD's service area; and

WHEREAS, the increased volume of return flows from the City of Krum WWTP will be discharged, at a maximum rate of 1.085 cfs (486.98 gpm), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W in Denton County; and

WHEREAS, the additional discharged Lake Chapman-derived return flows requested for reuse in the application will be diverted at the diversion point and rate authorized in Water Use Permit No. 5778; and

WHEREAS, UTRWD's application does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse by Water Use Permit No. 5778 (9,664 acre-feet per year) or to increase the maximum diversion rate at the authorized diversion point and only seeks to identify additional discharges of Lake Chapman-derived return flows to support the current reuse authorization in Water Use Permit No. 5778; and

WHEREAS, the Texas Commission on Environmental Quality finds that jurisdiction over the application is established; and

WHEREAS, the Executive Director recommends special conditions be included in this amendment; and



WHEREAS, UTRWD has provided, and the executive director has approved, an accounting plan (*Upper Trinity River Water District Reuse of Chapman Lake Water – Accounting Plan*) that identifies the sources and volumes of UTWD’s Lake Chapman-derived return flows and complies with the provisions of Paragraph 6.E. in Water Use Permit No. 5778; and

WHEREAS, the contracts and agreements described in Paragraphs 6.A. – 6.D. in Water Use Permit No. 5778 also apply to this amendment; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this amendment;

NOW, THEREFORE, this amendment to Water Use Permit No. 5778, designated Water Use Permit No. 5778A, is issued to Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

A. In addition to previous authorizations, Permittee is authorized to use the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and the Elm Fork Trinity River (Lake Lewisville) to convey not to exceed the following amounts of Lake Chapman-derived return flows for municipal and industrial purposes in Permittee’s service areas:

1. 16,814.2838 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the Mustang Special Utility District’s Sandbrock WWTP, authorized by TPDES Permit No. WQ0015536001.
2. 631.06 acre-feet per year of Lake Chapman-derived surface water-based return flows discharged from the City of Krum’s WWTP, authorized by TPDES Permit No. WQ0010729001, as amended.

B. Permittee’s diversion and reuse of Lake Chapman-derived return flows under the permit, as amended, is limited to the lesser of 9,664 acre-feet of its Lake Chapman-derived return flows per year, or amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by Permittee according to the approved accounting plan required by Paragraph 4.C. of this amendment.

2. DISCHARGE POINTS AND RATES

Return flows under this amendment will be discharged as follows:

- A. The additional 631.06 acre-feet of Lake Chapman-derived return flows will be discharged from the City of Krum’s WWTP, at a maximum rate of 1.085 cfs (486.98 gpm) (in combination with the previous authorization), at a point on North Hickory Creek, Trinity River Basin located at Latitude 33.257326 °N, Longitude 97.246869 °W.
- B. Lake Chapman-derived return flows will be discharged from the Sandbrock WWTP, at a maximum rate of 75.42 cfs (33,854 gpm), at a point on Little Elm Creek, Trinity River Basin being at Latitude 33.269722 °N and Longitude 96.915555 °W.

3. DIVERSION POINT AND RATE

Permittee is authorized to divert its discharged Lake Chapman-derived return flows at the

diversion point and rate specified in Water Use Permit No. 5778.

#### 4. SPECIAL CONDITIONS

- A. Permittee's rights to divert and reuse Lake-Chapman-derived return flows under this amendment are subject to the contracts and agreements described in Paragraphs 6.A. - 6.D. in Water Use Permit No. 5778.
- B. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in the quantities and qualities sufficient to satisfy the amendment. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
- C. Permittee shall only divert Lake Chapman-derived return flows that are actually discharged from each discharge point and are identified as Lake Chapman-derived return flows available for diversion and reuse in Permittee's approved accounting plan.
- D. Permittee shall only divert and use its Lake Chapman-derived return flows pursuant to the authorizations in Water Use Permit No. 5778 and the additional authorizations in Paragraph 1. USE and Paragraph 3. DIVERSION POINT AND RATE in this amendment in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water - Accounting Plan*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- E. Prior to diversion and reuse of any additional Lake Chapman-derived return flows under this amendment in excess of the amounts currently authorized by TPDES Permit Nos. WQ0015536001 and WQ0010729001, Permittee shall apply for and be granted the right to reuse those return flows.

This amendment is issued subject to all terms, conditions, and provisions contained in Water Use Permit No. 5778 except as specifically amended herein.

This amendment is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions, and provisions contained herein and such agreement is a condition precedent to the granting of this amendment.

All other matters requested in the application which are not specifically granted by this amendment are denied.

This amendment is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

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For the Commission

Date Issued:

DRAFT

# Texas Commission on Environmental Quality

## INTEROFFICE MEMORANDUM

**To:** Sarah Henderson, Project Manager  
Water Rights Permitting Team

**Date:** September 20, 2021

**Through:** Jason Godeaux, Team Leader  
Resource Protection Team

Kristin Wang, Senior Water Conservation Specialist  
Resource Protection Team

**From:** Jennifer Allis, Senior Water Conservation Specialist  
Resource Protection Team

**Subject:** Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

### APPLICATION SUMMARY

Water Use Permit No. 5778 (Permit) authorizes the Upper Trinity Regional Water District (UTRWD) to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of Lake Chapman-derived return flows (authorized by Certificate of Adjudication No. 03-4797) per year or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses, for subsequent diversion from the Joint Lewisville/UTRWD Intake Structure on Lake Lewisville at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm) for municipal and industrial uses in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant counties.

UTRWD requests to amend the Permit to add 15 MGD (16,814.2838 acre-feet per year) of surface water-based return flows, discharged from the Sandbrock Wastewater Treatment Plant (WWTP), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0015536001. UTRWD also requests to increase the amount of surface water-based return flows authorized for reuse from the City of Krum's WWTP, authorized under TPDES Permit No. WQ0010729001, from 0.137 MGD (153.61 acre-feet per year) to 0.7 MGD (784.67 acre-feet per

year). UTRWD does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse in the Permit (up to 9,664 acre-feet per year) but to identify additional discharges to support the reuse authorization.

UTRWD also requests authorization to use the bed and banks of Hickory Creek, Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

### **WATER CONSERVATION REVIEW**

Pursuant to Title 30 Texas Administrative Code §295.9, water conservation and drought contingency plans are not required to be submitted for this application.

The application is consistent with the 2021 Region C Water Plan and the 2022 State Water Plan because there is nothing in the water plans that conflicts with issuing this proposed amendment.

### **RECOMMENDATIONS**

Resource Protection Staff have no recommendations regarding the proposed amendment, if granted.


# Texas Commission on Environmental Quality


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## INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager  
Water Rights Permitting Team

Date: September 20, 2021

Through:  Jason Godeaux, Team Leader  
Resource Protection Team

From:  Kenneth Coonrod, Aquatic Scientist  
Resource Protection Team

Subject: Upper Trinity Regional Water District  
WRPERM 5778  
CN600639272  
Hickory Creek, Trinity River Basin  
Denton County

Environmental reviews of water right applications are conducted in accordance with applicable provisions of the Texas Water Code (TWC) and the administrative rules of the Texas Commission on Environmental Quality (TCEQ). The provisions applicable to environmental reviews can vary according to the type and the location of the authorization requested.

### **APPLICATION SUMMARY**

Water Use Permit No. 5778 (Permit) authorizes the Upper Trinity Regional Water District (UTRWD) to, among other things, use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), Trinity River Basin to convey the lesser of 9,664 acre-feet of Lake Chapman-derived return flows (authorized by Certificate of Adjudication No. 03-4797) per year or the amount of Lake Chapman-derived return flows actually discharged less conveyance losses, for subsequent diversion from the Joint Lewisville/UTRWD Intake Structure on Lake Lewisville at a maximum diversion rate of 66.96 cfs (30,053.6568 gpm) for municipal and industrial uses in UTRWD's service area in Denton, Collin, Grayson, Cooke, Wise, Dallas and Tarrant counties.

UTRWD requests to amend the Permit to add 15 MGD (16,814.2838 acre-feet per year) of surface water-based return flows, discharged from the Sandbrock Wastewater Treatment Plant (WWTP), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0015536001. UTRWD also requests to increase the amount of surface water-based return flows authorized for reuse from the City of Krum's WWTP, authorized under TPDES Permit No. WQ0010729001,

from 0.137 MGD (153.61 acre-feet per year) to 0.7 MGD (784.67 acre-feet per year). UTRWD does not request to increase the total amount of Lake Chapman-derived return flows currently authorized for reuse in the Permit (up to 9,664 acre-feet per year) but to identify additional discharges to support the reuse authorization.

UTRWD also requests authorization to use the bed and banks of Hickory Creek, Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

## ENVIRONMENTAL ANALYSIS

**Aquatic and Riparian Habitats:** UTRWD's proposed bed and banks project is located on Hickory Creek, a perennial stream, which traverses the Grand Prairie and Eastern Cross Timbers ecoregions (Griffith et al. 2007).

The checklist for the Trinity River Basin identified 52 species of ichthyofauna occurring within the Elm Fork Trinity hydrologic unit (United States Geological Survey hydrologic code 12030103) (Hendrickson and Cohen 2015). The sandbank pocketbook (*Lampsilis satura*), the Louisiana pigtoe (*Pleurobema riddellii*), and the Texas heelsplitter (*Potamilus amphichaenus*), high-interest aquatic species, are known to occur in Denton County (TPWD 2015). The request to use the bed and banks of Hickory Creek is not expected to have an effect on any high-interest aquatic species, because no additional state water is being requested by UTRWD.

On April 20, 2011, the TCEQ adopted environmental flow standards for the Trinity and San Jacinto Rivers, and Galveston Bay (Title 30 Texas Administrative Code (TAC) Chapter 298 Subchapter B). These environmental flow standards are considered adequate to support a sound ecological environment (Title 30 TAC §298.10). UTRWD's request to use the bed and banks of Hickory Creek is not a new appropriation of water or an amendment that increases the amount of water stored, taken or diverted; therefore, the environmental flow standards do not apply. UTRWD proposes to use the bed and banks of Hickory Creek to deliver water to its customers. UTRWD's request is not expected to adversely impact aquatic and riparian habitats in the area.

**Recreational Uses:** Hickory Creek has a presumed primary contact recreation 1 use (TCEQ 2018). UTRWD's request should not adversely impact recreational uses.

**Water Quality:** Hickory Creek has a presumed high aquatic life use (TCEQ 2018). UTRWD's request should not adversely impact water quality.

**Freshwater Inflows:** Freshwater inflows are critical for maintaining the historical productivity of bays and estuaries along the Gulf Coast. The proposed project is located more than 200 river miles from the Gulf of Mexico. The application does not request a new appropriation of water; therefore, UTRWD's request should not have any impact to Galveston Bay.



## **RECOMMENDATIONS**

Resource Protection staff have no recommendations regarding this proposed amendment, if granted.

## **LITERATURE CITED**

Griffith GE, Bryce SA, Omernik JM, Rogers AC. 2007. Ecoregions of Texas - Project Report to Texas Commission on Environmental Quality. Reston (VA): U.S. Geological Survey. Report No.: AS-199. 125p.

Hendrickson DA, Cohen AE. 2015. Fishes of Texas Project Database [Internet]. [cited 2021 Aug 7]; Version 2.0. Available from <http://www.fishesoftexas.org/home/> doi:10.17603/C3WC70

TCEQ. 2018. Texas Surface Water Quality Standards §§307.1-307.10. Austin (TX): Texas Commission on Environmental Quality.

TPWD. 2015. Rare, Threatened, and Endangered Species of Texas by County [Internet]. Austin (TX): Denton County, revised June 22, 2021. [cited 2021 Aug 7]. Available from <http://tpwd.texas.gov/gis/rtest/>.





UTRWD also requests authorization to use the bed and banks of Little Elm Creek, North Hickory Creek, Hickory Creek, and Elm Fork Trinity River (Lake Lewisville) Trinity River Basin, for subsequent diversion at points, rates, and for uses authorized in the Permit.

UTRWD submitted an accounting plan on August 30, 2017. The accounting plan was subsequently reviewed, and a final version was submitted on April 27, 2021.

The application was declared administratively complete on August 9, 2018.

## **Hydrology Review**

Resource Protection Staff did not recommend that the application be subject to instream flow requirements. See Resource Protection staff's September 20, 2021 memorandum.

Regarding the request to use the bed and banks of the Little Elm Creek, North Hickory Creek, and Hickory Creek to convey surface water-based return flows, the application included the information required in 30 Texas Administrative Code (TAC) §295.113. UTRWD indicates that the surface water-based return flows originate from an interbasin transfer (IBT) of water from Lake Chapman (Cooper Reservoir) in the Sulphur River Basin.

Staff reviewed current discharge information from the City of Krum's WWTP and determined that the current discharges were less than the amount currently authorized for reuse under Water Use Permit 5778. In evaluating whether UTRWDs requested amendment to the permit would affect senior water rights, staff notes that no water rights can be affected because no water rights have been granted based on the additional discharges.

UTRWD submitted an accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables*) that accounts for the discharge and diversion of return flows under the permit, as amended. Staff reviewed the accounting plan and found it to be acceptable. Maintenance of the accounting plan should ensure that only discharged return flows are diverted so senior water rights are protected.

## **Conclusion**

Staff can support granting the application provided the following special conditions be included in the amendment:

1. Diversions authorized under this amendment are dependent upon potentially interruptible return flows or discharges and are conditioned on the availability of those discharges. The right to divert the discharged return flows is subject to revocation if discharges become permanently unavailable for diversion and may be subject to reduction if the return flows are not available in quantities and qualities sufficient to fully satisfy the amendment. Should the discharges

- become permanently unavailable for diversion, Permittee shall immediately cease diversion and use of return flows authorized by this amendment and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee does not amend the permit or forfeit the amendment, the Commission may begin proceedings to cancel this amendment.
2. Permittee shall only divert daily surface water-based return flows that are actually discharged.
  3. Permittee shall only divert and use return flows pursuant to Paragraph 1. USE and Paragraph 3. DIVERSION in accordance with the most recently approved accounting plan (*Upper Trinity Regional Water District Reuse of Chapman Lake Water – Accounting Tables*). Any modifications to the accounting plan shall be approved by the Executive Director. Any modification to the accounting plan that changes the permit terms must be in the form of an amendment to the permit. Should Permittee fail to maintain the accounting plan or notify the Executive Director of any modifications to the plan, Permittee shall immediately cease diversion of discharged return flows authorized under this amendment, and either apply to amend the permit, or voluntarily forfeit the amendment. If Permittee fails to amend the accounting plan or forfeit the amendment, the Commission may begin proceedings to cancel the amendment. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
  4. Prior to diversion and reuse of any return flows in excess of the amounts currently authorized by TPDES Permit Nos. WQ0015536001 and WQ0010729001, Permittee shall apply for and be granted the right to reuse those return flows.

*Andrew Garcia*

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Andrew Garcia, Hydrologist

## Sarah Henderson

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**From:** Kathy Alexander  
**Sent:** Tuesday, April 27, 2021 1:08 PM  
**To:** Sarah Henderson; Andrew Garcia; Steven Mahr  
**Cc:** Brooke McGregor; Cheryl Covone; Chris Kozlowski  
**Subject:** FW: Revisions to UTRWD accounting plan- Water Use Permit No. 5778A  
**Attachments:** Detailed\_accounting\_spreadsheet\_documentation\_v7\_2021-04-22-highlighted.pdf;  
Accounting\_tables\_2021-04-22-toTCEQ.xlsx;  
Detailed\_accounting\_spreadsheet\_documentation\_v7\_2021-04-22-Clean.pdf

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**From:** McDonald, Ellen <[REDACTED]>  
**Sent:** Tuesday, April 27, 2021 12:59 PM  
**To:** Kathy Alexander <kathy.alexander@tceq.texas.gov>  
**Cc:** 'Ronna Hartt' <[REDACTED]>; James Aldredge <[REDACTED]>  
**Subject:** FW: Revisions to UTRWD accounting plan- Water Use Permit No. 5778A

Kathy,

Apologies- my outlook grabbed an incorrect email address for you and I just received the undeliverable response. Please see below and the attached.

Ellen

**Ellen McDonald, PhD., PE**

*Principal, Water Planning Practice Leader*  
Plummer

**P:** 817.806.1700

**D:** 817.806.1714

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**From:** McDonald, Ellen  
**Sent:** Monday, April 26, 2021 12:48 PM  
**To:** Kathy Alexander ([kalexand@tceq.state.tx.us](mailto:kalexand@tceq.state.tx.us)) <[kalexand@tceq.state.tx.us](mailto:kalexand@tceq.state.tx.us)>  
**Cc:** 'James Aldredge' <[REDACTED]> 'Ronna Hartt' <[REDACTED]>  
**Subject:** Revisions to UTRWD accounting plan- Water Use Permit No. 5778A

Kathy,

Thanks again to you and your team for providing comments to us on the accounting plan during the virtual meeting on April 16<sup>th</sup>. We have addressed these comments in the attached revised versions of the documentation and the accounting plan workbook.

I've included 2 versions of the documentation- one version (with "highlighted" in the filename) provides highlights of the sections that were edited or added. The "clean" version is the same, but with the highlighting removed.

With respect to your comment on Column P in Table C-4 (which applies to a similar column other places in the workbook), we have corrected the formulas and left these columns in the workbook but kept them hidden. These columns are labeled with the text "Information Only: Not Used for Accounting" in case someone unhides them.

Although these columns aren't used for any accounting, they provide information that UTRWD would like to track and prefers to leave in the workbook.

Please let me know if you have any additional questions related to these revisions.

Thanks,  
Ellen



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# UPPER TRINITY REGIONAL WATER DISTRICT

## REUSE OF CHAPMAN LAKE WATER

### ACCOUNTING PLAN DETAILED DOCUMENTATION

Last Revised: April 22, 2021

#### Introduction

The purpose of this document is to provide a detailed explanation of each calculation contained in the Chapman Water Accounting Plan. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

#### Input Tables

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

##### **Table I-1**

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Lewisville Lake Water Surface Elevation, ft:</i>	Water surface elevation of Lewisville Lake at beginning of month, obtained from USACOE.
<i>Assumed WTP and Raw Water</i>	Losses between RWTP intake and RWTP

FIELD	DESCRIPTION
<i>Conveyance Losses, Regional WTP (L_RWTP):</i>	discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
<i>Doe Branch Channel Length, miles</i>	Length of Doe Branch between point of Chapman water discharge and Lewisville Lake. Updated as Lewisville Lake water surface elevation changes, using automatic lookup to Doe Branch Stream Distance Table (attached). Data in this table will be augmented by surveying or other appropriate data collection methods when water level falls below 515 ft.
<i>Doe Branch Losses (L_Doe)</i>	Computed Doe Branch losses, expressed as percentage of Chapman water entering Doe Branch. Computed as <i>Assumed Doe Branch Losses, %/mile</i> x <i>Doe Branch Channel Length, miles</i> .
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.

**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Treated CLW from HWTP (at WTP)</i>	Amount of treated Chapman Lake Water leaving the Harpool WTP. Metered value.
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.

**Table I-3**

This spreadsheet contains all daily input of measured discharges and any direct or indirect reuse losses from all District or customer wastewater treatment plants (WWTPs) participating in the Chapman Reuse program. There are three columns of input data for each WWTP. A description of each column is provided below.



<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Measured Discharge</i>	Total amount of treated wastewater discharged from WWTP. Metered value.
<i>Direct Reuse Losses</i>	Any direct diversion of treated wastewater for direct reuse to a user (e.g. for irrigation) between the Measured Discharge meter location and the discharge. Metered value.
<i>Indirect Reuse Losses</i>	Any authorized diversion of treated wastewater (for indirect reuse) following discharge, not associated with this water right. Metered value.

Average daily discharge, from each WWTP, obtained from metered values, will be entered in the appropriate cells on this table. Discharge data is only required for those WWTPs that contribute return flows subsequently used by the District as part of the program.

### Calculation Tables

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs (both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

#### Table C-1

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW</i>	C1-1	District's portion of Chapman Lake Water (from Table I-2, Column 2)
<i>CLW Diverted Directly to Harpool WTP</i>	C1-2	Amount of Chapman Lake water diverted directly to the future Harpool WTP (from Table I-2, Column 3)

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District's portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch (from Table I-1)
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District's portion of Chapman Lake water within Doe Branch. Computed quantity.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 7).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 6)
<i>Total CLW Available for Distribution from both</i>	C1-7a	Total amount of Chapman Lake water available for distribution to Chapman

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>WTPs (at WTP)</i>		Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 7).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to ALL Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to all water customers. Sum of daily metered values for all water customer meters, obtained from Table I-2 (includes other water customers).
<i>Total Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied to all Chapman Lake water customers. Sum of daily metered values from all Chapman water customer meters, obtained from Table I-2 (does not include other water customers).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at WTP)</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (e.g. Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLW and CLRW (at WTP)</i>	C1-11ab1	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP). (Col. [11a] + Col. [11b])
<i>Unutilized CLW and CLRW (at Lake)</i>	C1-11ab2	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to intake). (Col. [11ab1]/(1-col. [6c]))
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers</i>	C1-12	Percentage of Chapman Lake water supplied to each Chapman Lake water customer. Computed quantity.
<i>Amount of Water Purchased by District from Dallas</i>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<i>Amount of Water Purchased by District from Denton</i>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<i>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</i>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake).

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
		Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<i>Chapman Lake Reuse Water used by District</i>	C1-15c	Amount of Chapman Lake Reuse Water used by District customers. Computer quantity.
<i>Available Chapman Lake Reuse Water (CLRW) (at WTP)</i>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<i>Potential CLRW Used by CL Customers</i>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] – [C1-10c]. Otherwise equal to zero.
<i>CLRW Used by CL Customers</i>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.
<i>Total Raw Water Withdrawal minus CLRW</i>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.
<i>Potential New CLW Withdrawal (only if less than CLW Demand)</i>	C1-19	Interim calculation. If [C1-18] is less than new CLW available then equal to [C1-18]. Otherwise equal to new CLW available ([C1-7a]).
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge from Customer (CWRP)</i>	C2-21	Portion of Chapman Lake water return flow in WWTP discharge attributed to this particular customer.
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer (from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake. Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRP less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRP)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.
<i>Direct/Indirect Reuse Losses</i>	C3-30	Amount of Chapman Lake water lost to direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.



<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

## Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.

## **Doe Branch Stream Distance Table**

This table provides an estimate of stream distance from the point where Chapman Lake water is discharged into Doe Branch (upstream of Lewisville Lake) to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses in Doe Branch. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

## **Stream Distance Lookup Table**

This table provides an estimate of stream distance from the point of discharge of each WWTP to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses from the discharge location to the lake. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

# UPPER TRINITY REGIONAL WATER DISTRICT

## REUSE OF CHAPMAN LAKE WATER

### ACCOUNTING PLAN DETAILED DOCUMENTATION

Last Revised: April 22, 2021

#### Introduction

The purpose of this document is to provide a detailed explanation of each calculation contained in the Chapman Water Accounting Plan. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

#### Input Tables

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

##### **Table I-1**

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Lewisville Lake Water Surface Elevation, ft:</i>	Water surface elevation of Lewisville Lake at beginning of month, obtained from USACOE.
<i>Assumed WTP and Raw Water</i>	Losses between RWTP intake and RWTP

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Conveyance Losses, Regional WTP (L_RWTP):</i>	discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
<i>Doe Branch Channel Length, miles</i>	Length of Doe Branch between point of Chapman water discharge and Lewisville Lake. Updated as Lewisville Lake water surface elevation changes, using automatic lookup to Doe Branch Stream Distance Table (attached). Data in this table will be augmented by surveying or other appropriate data collection methods when water level falls below 515 ft.
<i>Doe Branch Losses (L_Doe)</i>	Computed Doe Branch losses, expressed as percentage of Chapman water entering Doe Branch. Computed as <i>Assumed Doe Branch Losses, %/mile</i> x <i>Doe Branch Channel Length, miles</i> .
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.

**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Treated CLW from HWTP (at WTP)</i>	Amount of treated Chapman Lake Water leaving the Harpool WTP. Metered value.
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.

**Table I-3**

This spreadsheet contains all daily input of measured discharges and any direct or indirect reuse losses from all District or customer wastewater treatment plants (WWTPs) participating in the Chapman Reuse program. There are three columns of input data for each WWTP. A description of each column is provided below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Measured Discharge</i>	Total amount of treated wastewater discharged from WWTP. Metered value.
<i>Direct Reuse Losses</i>	Any direct diversion of treated wastewater for direct reuse to a user (e.g. for irrigation) between the Measured Discharge meter location and the discharge. Metered value.
<i>Indirect Reuse Losses</i>	Any authorized diversion of treated wastewater (for indirect reuse) following discharge, not associated with this water right. Metered value.

Average daily discharge, from each WWTP, obtained from metered values, will be entered in the appropriate cells on this table. Discharge data is only required for those WWTPs that contribute return flows subsequently used by the District as part of the program.

### Calculation Tables

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs (both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

#### Table C-1

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW</i>	C1-1	District's portion of Chapman Lake Water (from Table I-2, Column 2)
<i>CLW Diverted Directly to Harpool WTP</i>	C1-2	Amount of Chapman Lake water diverted directly to the future Harpool WTP (from Table I-2, Column 3)

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District's portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch (from Table I-1)
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District's portion of Chapman Lake water within Doe Branch. Computed quantity.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 7).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 6)
<i>Total CLW Available for Distribution from both</i>	C1-7a	Total amount of Chapman Lake water available for distribution to Chapman

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>WTPs (at WTP)</i>		Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 7).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to ALL Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to all water customers. Sum of daily metered values for all water customer meters, obtained from Table I-2 (includes other water customers).
<i>Total Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied to all Chapman Lake water customers. Sum of daily metered values from all Chapman water customer meters, obtained from Table I-2 (does not include other water customers).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at WTP)</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.



<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (e.g. Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLW and CLRW (at WTP)</i>	C1-11ab1	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP). (Col. [11a] + Col. [11b])
<i>Unutilized CLW and CLRW (at Lake)</i>	C1-11ab2	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to intake). (Col. [11ab1]/(1-col. [6c]))
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers</i>	C1-12	Percentage of Chapman Lake water supplied to each Chapman Lake water customer. Computed quantity.
<i>Amount of Water Purchased by District from Dallas</i>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<i>Amount of Water Purchased by District from Denton</i>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<i>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</i>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake).

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
		Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<i>Chapman Lake Reuse Water used by District</i>	C1-15c	Amount of Chapman Lake Reuse Water used by District customers. Computer quantity.
<i>Available Chapman Lake Reuse Water (CLRW) (at WTP)</i>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<i>Potential CLRW Used by CL Customers</i>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] – [C1-10c]. Otherwise equal to zero.
<i>CLRW Used by CL Customers</i>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.
<i>Total Raw Water Withdrawal minus CLRW</i>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.
<i>Potential New CLW Withdrawal (only if less than CLW Demand)</i>	C1-19	Interim calculation. If [C1-18] is less than new CLW available then equal to [C1-18]. Otherwise equal to new CLW available ([C1-7a]).
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge from Customer (CWRP)</i>	C2-21	Portion of Chapman Lake water return flow in WWTP discharge attributed to this particular customer.
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer (from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake. Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRP less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRP)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.
<i>Direct/Indirect Reuse Losses</i>	C3-30	Amount of Chapman Lake water lost to direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

## Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.

### **Doe Branch Stream Distance Table**

This table provides an estimate of stream distance from the point where Chapman Lake water is discharged into Doe Branch (upstream of Lewisville Lake) to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses in Doe Branch. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

### **Stream Distance Lookup Table**

This table provides an estimate of stream distance from the point of discharge of each WWTP to the lake, as indicated by the measured water surface elevation. This stream distance is used to calculate carriage losses from the discharge location to the lake. Stream distances are based on USGS Quad map data, with linear interpolation between contours and extrapolation for lower lake level elevations not shown on the USGS map.

**Upper Trinity Regional Water District**

**Water Use Permit No. 5778A**

Accounting Plan with text file available upon request


Contact Mr. Chris Kozlowski at (512) 239-1801



# TCEQ Interoffice Memorandum

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TO: Office of the Chief Clerk  
Texas Commission on Environmental Quality

THRU:  Chris Kozlowski, Team Leader  
Water Rights Permitting Team

FROM: Calvin Clary, Project Manager  
Water Rights Permitting Team

DATE: August 9, 2018

SUBJECT: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Denton County

2018 AUG -9 AM 11:06  
CHIEF CLERKS OFFICE  
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

The application and partial fees were received on August 31, 2017. Additional information and fees were received on September 14, 2017, June 22, and July 20, 2018. The application was declared administratively complete and filed with the Office of the Chief Clerk on August 9, 2018. Mailed notice to the downstream water right holders of record is required for conveying water in the bed and banks of a stream pursuant to Texas Administrative Code (TAC) § 295.161(a).

Filing, recording, and notice fees have been paid in full. One-half of the use fees have been paid pursuant to 30 TAC § 295.133(b), and the application is sufficient for filing.

  
\_\_\_\_\_  
Calvin Clary, Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

OCC Mailed Notice Required  YES  NO

Bryan W. Shaw, Ph.D., P.E., *Chairman*  
Toby Baker, *Commissioner*  
Jon Niermann, *Commissioner*  
Stephanie Bergeron Perdue, *Interim Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

August 9, 2018

Mr. James Aldredge  
Lloyd Gosselink, Rochelle, and Townsend, PC  
816 Congress Ave, STE 1900  
Austin, Texas 78701

RE: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Denton County

Dear Mr. Aldredge:

This acknowledges the receipt, on July 20, 2018, of the requested additional information and fees in the amount of \$8,750.16 (Receipt No. M828123A & M828123B, copies enclosed).

The application was declared administratively complete and filed with the Office of the Chief Clerk on August 9, 2018. Staff will continue processing the application for consideration by the Executive Director.

Please be advised that additional information may be requested during the technical review phase of the application process.

If you have any questions concerning the application, please contact me via email at [calvin.clary@tceq.texas.gov](mailto:calvin.clary@tceq.texas.gov) or at (512) 239-4641.

Sincerely,

A handwritten signature in cursive script, appearing to read "Calvin Clary".

Calvin Clary, Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Enclosures



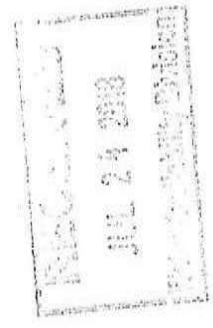
23-JUL-18 08:33 AM

TCEQ - A/R RECEIPT REPORT BY ACCOUNT NUMBER

<u>Fee Description</u>	<u>Fee Code</u>	<u>Account#</u>	<u>Account Name</u>	<u>Ref#1</u>	<u>Ref#2</u>	<u>Paid In By</u>	<u>Check Number</u>	<u>CC Type</u>	<u>Tran Code</u>	<u>Slip Key</u>	<u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
WTR USE PERMITS	WUP			M828123A			35442			BS00067434		23-JUL-18	-\$8,716.32
	WUP			5778A			072018	N		D8807059			
			WATER USE PERMITS	LLOYD			SPREDEAU	CK					
				GOSELINK									
				ROCHELLE &									
				TOWNSEND PC									
	WUP			M828124			1942139			BS00067434		23-JUL-18	-\$100.00
	WUP			204502			072018	N		D8807059			
			WATER USE PERMITS	TETRA TECH			SPREDEAU	CK					
				INC									
	WUP			M828125			1942728			BS00067434		23-JUL-18	-\$100.00
	WUP			5024A			072018	N		D8807059			
			WATER USE PERMITS	TETRA TECH			SPREDEAU	CK					
				INC									

Total (Fee Code) : -\$8,916.32

Grand Total: -\$15,002.74





23-JUL-18 08:33 AM

TCEQ - A/R RECEIPT REPORT BY ACCOUNT NUMBER

<u>Fee Description</u>	<u>Fee Code</u>	<u>Account#</u>	<u>Account Name</u>	<u>Ref#1</u>	<u>Ref#2</u>	<u>Paid In By</u>	<u>Check Number</u>	<u>CC Type</u>	<u>Tran Code</u>	<u>Slip Key</u>	<u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
NOTICE FEES-WUP-WATER USE PERM	PTGU			M828123B			35442					23-JUL-18	
				5778A			072018	N		ES00067434	D8807059		-\$333.84
			NOTICE FEES WUP WATER USE PERMITS	LLOYD			SPREDEAU	CK					
				GOSSELINK									
				ROCHELLE &									
				TOWNSEND PC									

Total (Fee Code) : -\$333.84





July 20, 2018

Mr. Calvin Clary  
Project Manager, Water Rights Permitting Team  
Texas Commission on Environmental Quality (MC 160)  
P.O. Box 13087  
Austin, Texas 78711-3087

RECEIVED  
2018 JUL 20 A 11:14  
WATER AVAILABILITY DIV.

Re: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise Counties

Dear Calvin:

This letter is submitted on behalf of my client, the Upper Trinity Regional Water District ("UTRWD"), in response to your letter dated May 22, 2018, in connection with the above-referenced application (the "Application"). UTRWD responds to your respective requests for additional information as follows:

1. *Specify the name of the watercourse that will be used to convey return flows from the Sandbrock Wastewater Treatment Plant (WWTP). Staff notes page 1, item 3 and page 2, item 5 of the application, (the general location map and TPDES Permit No. WQ0015536001) identify Little Elm Creek as the discharge point. However, page 1, item 4 of the Supplemental Discharge Point Information Sheet and the Supplement to Application state that the bed and banks of Doe Branch will be used to transport the Sandbrock WWTP return flows from the point of discharge to the point of diversion.*

Response to Request No. 1:

In its original application, UTRWD identified all state watercourses that are currently authorized for use by the existing Water Use Permit No. 5778. For purposes of clarification, the additional authorizations requested in the Application related to the Sandbrock WWTP would authorize UTRWD to convey water in Little Elm Creek and Lewisville Lake. For additional clarification, the authorizations requested in the Application related to the additional Krum WWTP return flow diversions would authorize UTRWD to convey water in North Hickory Creek, Hickory Creek, and Lewisville Lake. All other state watercourses identified in the Application will be unaffected by any authorization requested.

2. *Provide the following additional information in support of the request to use the bed and banks of a watercourse to convey return flows from the City of Krum and the Sandbrock WWTPs for subsequent diversion and reuse:*

- a. *Conveyance losses, including the method used to calculate the losses, due to transportation, evaporation (including the reservoir), seepage, channel or other associated carriage losses;*
- b. *An assessment of the adequacy of the quantity and quality of the flows remaining after the proposed diversion to meet instream flow needs and bay and estuary freshwater inflow needs;*
- c. *Five years of historical monthly discharge data, in electronic format (spreadsheet or database), for the City of Krum WWTP.*

Response to Request No. 2:

- a. The procedure for determining conveyance losses is described in the "Accounting Plan Detailed Documentation" provided to the TCEQ with the application. Documentation under "Table I-1" describes the assumptions used for conveyance losses. These assumptions reference sections of the reuse agreement between UTRWD and the City of Dallas, as described in the introduction of the document.
  - b. All return flows proposed for diversion will originate from outside of the Trinity River basin and, therefore, will not constitute any portion of the natural or ordinary flows of the state watercourses in question. As a result, the District anticipates the proposed amendment will not affect the quantity and quality of flows available to meet instream flow needs and bay and estuary freshwater inflow needs.
  - c. See data provided electronically attached.
3. *Confirm that all of the return flows requested in the application originate from Lake Chapman water supplies.*

Response to Request No. 3:

Currently, the City of Krum does not receive any water supply from UTRWD. Therefore, none of the return flows currently discharged from the Krum WWTP originate from Lake Chapman water supplies. UTRWD anticipates that the City of Krum will receive water supply from UTRWD in the future. When that occurs, UTRWD will only divert that portion of Krum WWTP return flows attributable to Lake Chapman-originating water supplies. Similarly, UTRWD will divert only return flows from Sandbrock WWTP that originate from Lake Chapman water supplies. UTRWD has addressed this issue in more detail in the accounting plan submitted along with the Application. The accounting plan requires UTRWD to track Lake Chapman-originating water supplies throughout its system and to account for the portion of all return flows authorized for reuse that are attributable to water supplies originating from Lake Chapman.

4. *Remit fees in the amount of \$17,465.48 as described below. Please make checks payable to the TCEQ or Texas Commission on Environmental Quality.*

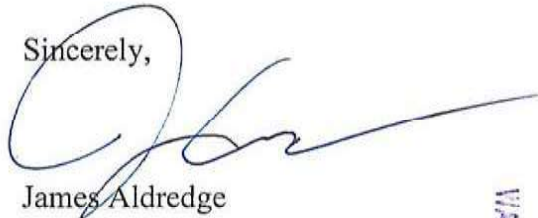
Filing Fee (amendment)	\$ 100.00
Recording Fee (\$1.25 x 1 pages)	\$ 1.25
Use Fee (\$1.00 x 17,432.64 ac-ft)	\$ 17,432.64
Notice Fee (Trinity River Basin)	\$ 33.84
<u>Total Fees</u>	<u>\$ 135.09</u>
<u>Fees Received</u>	<u>\$ 101.25</u>
<b>Fees Due</b>	<b>\$ 17,465.48</b>

Response to Request No. 4:

As stated in TCEQ Rule 295.133(a)(4), a one-time use fee will be applied for water rights applications at a rate of "\$1.00 per acre-foot to be diverted annually." The Application states that it is not requesting any increase in the amount authorized to be diverted under Permit 5778, which is 9,664 acre-feet of water annually. Consequently, UTRWD believes that the "Use Fee" reflected in the RFI has been miscalculated. Pursuant to a telephonic conversation between the undersigned counsel for UTRWD and Mr. Bert Galvan of the Water Rights Permitting and Availability office, UTRWD is submitting with this letter half of the Use Fee as stated in the RFI along with the other combined fees (\$135.09) minus fees received (\$101.25) under 30 Tex. Admin. Code § 295.133(b). UTRWD will continue to work with TCEQ staff to determine if any adjustment in calculation of the Use Fee is appropriate or necessary. In accordance with Rule 295.133(b), UTRWD intends to pay any Use Fee balance no later than 180 days after notice is mailed that the permit has been granted. Please find enclosed my firm's check in the amount of \$8,750.16 for the fees associated with the Application as described in this response.

If you have any questions regarding the Application, please do not hesitate to contact me at (512) 322-5859.

Sincerely,



James Aldredge

Copy: Larry Patterson, UTRWD  
Ronna Hartt, UTRWD  
Lambeth Townsend, the Firm

Enclosures

RECEIVED  
2018 JUL 20 A 11: 15  
WATER AVAILABILITY DIV.



EPA ID	TPDES Permit No.	Facility Name	Monitoring Period End Date	Outfall	Parameter	Daily Ave (MGD)
TX0024198	WQ0010729001	CITY OF KRUM WWTF	1/31/2013	001A	Flow, in conduit or thru treatment plant	.007992
TX0024198	WQ0010729001	CITY OF KRUM WWTF	2/28/2013	001A	Flow, in conduit or thru treatment plant	.008787
TX0024198	WQ0010729001	CITY OF KRUM WWTF	3/31/2013	001A	Flow, in conduit or thru treatment plant	.00832
TX0024198	WQ0010729001	CITY OF KRUM WWTF	4/30/2013	001A	Flow, in conduit or thru treatment plant	.01134
TX0024198	WQ0010729001	CITY OF KRUM WWTF	5/31/2013	001A	Flow, in conduit or thru treatment plant	.010272
TX0024198	WQ0010729001	CITY OF KRUM WWTF	6/30/2013	001A	Flow, in conduit or thru treatment plant	.009146
TX0024198	WQ0010729001	CITY OF KRUM WWTF	7/31/2013	001A	Flow, in conduit or thru treatment plant	.010894
TX0024198	WQ0010729001	CITY OF KRUM WWTF	8/31/2013	001A	Flow, in conduit or thru treatment plant	.009626
TX0024198	WQ0010729001	CITY OF KRUM WWTF	9/30/2013	001A	Flow, in conduit or thru treatment plant	.011909
TX0024198	WQ0010729001	CITY OF KRUM WWTF	10/31/2013	001A	Flow, in conduit or thru treatment plant	.023509
TX0024198	WQ0010729001	CITY OF KRUM WWTF	11/30/2013	001A	Flow, in conduit or thru treatment plant	.024979
TX0024198	WQ0010729001	CITY OF KRUM WWTF	12/31/2013	001A	Flow, in conduit or thru treatment plant	.027098
TX0024198	WQ0010729001	CITY OF KRUM WWTF	1/31/2014	001A	Flow, in conduit or thru treatment plant	.0285
TX0024198	WQ0010729001	CITY OF KRUM WWTF	2/28/2014	001A	Flow, in conduit or thru treatment plant	.0231
TX0024198	WQ0010729001	CITY OF KRUM WWTF	3/31/2014	001A	Flow, in conduit or thru treatment plant	.0244
TX0024198	WQ0010729001	CITY OF KRUM WWTF	4/30/2014	001A	Flow, in conduit or thru treatment plant	.027
TX0024198	WQ0010729001	CITY OF KRUM WWTF	5/31/2014	001A	Flow, in conduit or thru treatment plant	.026
TX0024198	WQ0010729001	CITY OF KRUM WWTF	6/30/2014	001A	Flow, in conduit or thru treatment plant	.027
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TX0024198	WQ0010729001	CITY OF KRUM WWTF	9/30/2014	001A	Flow, in conduit or thru treatment plant	.022
TX0024198	WQ0010729001	CITY OF KRUM WWTF	10/31/2014	001A	Flow, in conduit or thru treatment plant	.024575
TX0024198	WQ0010729001	CITY OF KRUM WWTF	11/30/2014	001A	Flow, in conduit or thru treatment plant	.021535
TX0024198	WQ0010729001	CITY OF KRUM WWTF	12/31/2014	001A	Flow, in conduit or thru treatment plant	.023
TX0024198	WQ0010729001	CITY OF KRUM WWTF	1/31/2015	001A	Flow, in conduit or thru treatment plant	.025522
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TX0024198	WQ0010729001	CITY OF KRUM WWTF	3/31/2015	001A	Flow, in conduit or thru treatment plant	.032
TX0024198	WQ0010729001	CITY OF KRUM WWTF	4/30/2015	001A	Flow, in conduit or thru treatment plant	.033
TX0024198	WQ0010729001	CITY OF KRUM WWTF	5/31/2015	001A	Flow, in conduit or thru treatment plant	.070416
TX0024198	WQ0010729001	CITY OF KRUM WWTF	6/30/2015	001A	Flow, in conduit or thru treatment plant	.029
TX0024198	WQ0010729001	CITY OF KRUM WWTF	7/31/2015	001A	Flow, in conduit or thru treatment plant	.028
TX0024198	WQ0010729001	CITY OF KRUM WWTF	8/31/2015	001A	Flow, in conduit or thru treatment plant	.0082
TX0024198	WQ0010729001	CITY OF KRUM WWTF	9/30/2015	001A	Flow, in conduit or thru treatment plant	.071
TX0024198	WQ0010729001	CITY OF KRUM WWTF	10/31/2015	001A	Flow, in conduit or thru treatment plant	.115
TX0024198	WQ0010729001	CITY OF KRUM WWTF	11/30/2015	001A	Flow, in conduit or thru treatment plant	.174
TX0024198	WQ0010729001	CITY OF KRUM WWTF	12/31/2015	001A	Flow, in conduit or thru treatment plant	.177
TX0024198	WQ0010729001	CITY OF KRUM WWTF	1/31/2016	001A	Flow, in conduit or thru treatment plant	.1281
TX0024198	WQ0010729001	CITY OF KRUM WWTF	2/29/2016	001A	Flow, in conduit or thru treatment plant	.116
TX0024198	WQ0010729001	CITY OF KRUM WWTF	3/31/2016	001A	Flow, in conduit or thru treatment plant	.163



TX0024198	WQ0010729001	CITY OF KRUM WWTF	4/30/2016	001A	Flow, in conduit or thru treatment plant	.127
TX0024198	WQ0010729001	CITY OF KRUM WWTF	5/31/2016	001A	Flow, in conduit or thru treatment plant	.151
TX0024198	WQ0010729001	CITY OF KRUM WWTF	6/30/2016	001A	Flow, in conduit or thru treatment plant	.161
TX0024198	WQ0010729001	CITY OF KRUM WWTF	7/31/2016	001A	Flow, in conduit or thru treatment plant	.09
TX0024198	WQ0010729001	CITY OF KRUM WWTF	8/31/2016	001A	Flow, in conduit or thru treatment plant	.0924
TX0024198	WQ0010729001	CITY OF KRUM WWTF	9/30/2016	001A	Flow, in conduit or thru treatment plant	.083
TX0024198	WQ0010729001	CITY OF KRUM WWTF	10/31/2016	001A	Flow, in conduit or thru treatment plant	.0928
TX0024198	WQ0010729001	CITY OF KRUM WWTF	11/30/2016	001A	Flow, in conduit or thru treatment plant	.107
TX0024198	WQ0010729001	CITY OF KRUM WWTF	12/31/2016	001A	Flow, in conduit or thru treatment plant	.099
TX0024198	WQ0010729001	CITY OF KRUM WWTF	1/31/2017	001A	Flow, in conduit or thru treatment plant	.129
TX0024198	WQ0010729001	CITY OF KRUM WWTF	2/28/2017	001A	Flow, in conduit or thru treatment plant	.135
TX0024198	WQ0010729001	CITY OF KRUM WWTF	3/31/2017	001A	Flow, in conduit or thru treatment plant	.119
TX0024198	WQ0010729001	CITY OF KRUM WWTF	4/30/2017	001A	Flow, in conduit or thru treatment plant	.1398
TX0024198	WQ0010729001	CITY OF KRUM WWTF	5/31/2017	001A	Flow, in conduit or thru treatment plant	.113
TX0024198	WQ0010729001	CITY OF KRUM WWTF	6/30/2017	001A	Flow, in conduit or thru treatment plant	.1584
TX0024198	WQ0010729001	CITY OF KRUM WWTF	7/31/2017	001A	Flow, in conduit or thru treatment plant	.104
TX0024198	WQ0010729001	CITY OF KRUM WWTF	8/31/2017	001A	Flow, in conduit or thru treatment plant	.112
TX0024198	WQ0010729001	CITY OF KRUM WWTF	9/30/2017	001A	Flow, in conduit or thru treatment plant	.103
TX0024198	WQ0010729001	CITY OF KRUM WWTF	10/31/2017	001A	Flow, in conduit or thru treatment plant	.094
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TX0024198	WQ0010729001	CITY OF KRUM WWTF	1/31/2018	001A	Flow, in conduit or thru treatment plant	.093
TX0024198	WQ0010729001	CITY OF KRUM WWTF	2/28/2018	001A	Flow, in conduit or thru treatment plant	.113
TX0024198	WQ0010729001	CITY OF KRUM WWTF	3/31/2018	001A	Flow, in conduit or thru treatment plant	.062
TX0024198	WQ0010729001	CITY OF KRUM WWTF	4/30/2018	001A	Flow, in conduit or thru treatment plant	.085
TX0024198	WQ0010729001	CITY OF KRUM WWTF	5/31/2018	001A	Flow, in conduit or thru treatment plant	.096

Daily Max (MGD)	Monthly Flow Total (MG)	Days in month
.015809	0.247752	31
.036303	0.246036	28
.021877	0.25792	31
.019369	0.3402	30
.017792	0.318432	31
.013847	0.27438	30
.014841	0.337714	31
.004774	0.298406	31
.018233	0.35727	30
.05055	0.728779	31
.038472	0.74937	30
.047476	0.840038	31
.0484	0.8835	31
.05	0.6468	28
.042	0.7564	31
.054	0.81	30
.042	0.806	31
.053	0.81	30
.07466	0.827452	31
.057852	0.891374	31
.037	0.66	30
.037618	0.761825	31
.03615	0.64605	30
.039	0.713	31
.055847	0.791182	31
.042	0.784	28
.058	0.992	31
.059	0.99	30
.092105	2.182896	31
.065	0.87	30
.053	0.868	31
.0374	0.2542	31
.093	2.13	30
.317	3.565	31
.561	5.22	30
.668	5.487	31
.2226	3.9711	31
.147	3.364	29
.454	5.053	31

.354	3.81	30
.292	4.681	31
.452	4.83	30
.142	2.79	31
.246	2.8644	31
.114	2.49	30
.1572	2.8768	31
.299	3.21	30
.134	3.069	31
.22	3.999	31
.246	3.78	28
.192	3.689	31
.3912	4.194	30
.139	3.503	31
.3445	4.752	30
.164	3.224	31
.173	3.472	31
.137	3.09	30
.108	2.914	31
.106	3.03	30
.129	2.945	31
.117	2.883	31
.36	3.164	28
.167	1.922	31
.109	2.55	30
.174	2.976	31

Bryan W. Shaw, Ph.D., P.E., *Chairman*  
Toby Baker, *Commissioner*  
Jon Niermann, *Commissioner*  
Stephanie Bergeron Perdue, *Interim Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

June 25, 2018

Mr. James Aldredge  
Lloyd Gosselink, Rochelle, and Townsend, PC  
816 Congress Ave, STE 1900  
Austin, Texas 78701

**CERTIFIED MAIL**

RE: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise Counties

Dear Mr. Aldredge:

This acknowledges receipt, on June 22, 2018, of the applicant's request for an extension of time to respond to the Texas Commission on Environmental Quality request for additional information letter, dated May 22, 2018.

The extension request is granted until July 21, 2018, and after that date the application may be returned pursuant to Title 30 Texas Administrative Code § 281.18. No further extensions will be granted associated with this request for information.

If you have any questions concerning the application, please contact Calvin Clary via e-mail at [calvin.clary@tceq.texas.gov](mailto:calvin.clary@tceq.texas.gov) or by telephone at (512) 239-4641.

Sincerely,

A handwritten signature in cursive script that reads "Lori Hamilton".

Lori Hamilton, Manager  
Water Rights Permitting & Availability Section  
Water Availability Division

LH/cc

## Calvin Clary

---

**From:** James Aldredge [REDACTED]  
**Sent:** Friday, June 22, 2018 10:53 AM  
**To:** Calvin Clary  
**Cc:** Chris Kozlowski  
**Subject:** Application No. 5778A -- UTRWD RFI Extension Request  
**Attachments:** JTA ltr to C. Clary re Extension of Time for RFI Response 6.22.2018.pdf

Calvin,

Please see the attached letter requesting a 30-day extension of today's deadline to respond to four RFIs you delivered to Jason Hill on May 22, 2018. Mr. Hill is no longer with my Firm, and I have been asked to respond in his place. I spoke with Chris by phone yesterday, and he indicated this request would not be a problem. Please let me know if you have any questions or would otherwise like to discuss this request in more detail.

Thanks,  
James



JAMES ALDREDGE

Principal  
512-322-5859 Direct  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Ave., Suite 1900, Austin, TX 78701  
www.lglawfirm.com | 512-322-5800

News | vCard | LinkedIn | Map

\*\*\*\*ATTENTION TO PUBLIC OFFICIALS AND OFFICIALS WITH OTHER INSTITUTIONS SUBJECT TO THE OPEN MEETINGS ACT \*\*\*\*

A "REPLY TO ALL" OF THIS EMAIL COULD LEAD TO VIOLATIONS OF THE TEXAS OPEN MEETINGS ACT. PLEASE REPLY ONLY TO LEGAL COUNSEL.

### CONFIDENTIALITY NOTICE:

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June 22, 2018

Mr. Calvin Clary  
Project Manager, Water Rights Permitting Team  
Texas Commission on Environmental Quality (MC 160)  
P.O. Box 13087  
Austin, Texas 78711-3087

**VIA ELECTRONIC MAIL**

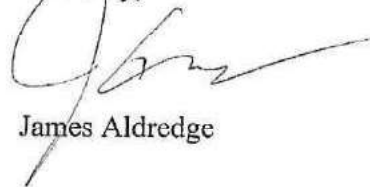
Re: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise Counties

Dear Mr. Clary:

This letter is submitted on behalf of my client, the Upper Trinity Regional Water District ("UTRWD"), in response to your letter dated May 22, 2018, in connection with the above-referenced application (the "Application"). Due to circumstances beyond UTRWD's control, UTRWD has not completed compiling information and data necessary to respond to the four requests for information ("RFIs") you submitted in your May 22, 2018 letter. UTRWD is continuing to diligently compile the requested information. However, UTRWD respectfully requests that the Water Rights Permitting Team grant UTRWD an additional 30 days to respond to the RFIs. UTRWD proposed that a new deadline of July 21, 2018 be set for a response.

Thank you for your consideration. If you have any questions regarding the Application, please do not hesitate to contact me at (512) 322-5859.

Sincerely,



James Aldredge

Copy: Chris Kozlowski, TCEQ  
Larry Patterson, UTRWD  
Ronna Hartt, UTRWD  
Lambeth Townsend, the Firm



Bryan W. Shaw, Ph.D., P.E., *Chairman*  
Toby Baker, *Commissioner*  
Jon Niermann, *Commissioner*  
Stephanie Bergeron Perdue, *Interim Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

May 22, 2018

Mr. Jason Hill  
Lloyd Gosselink, Rochelle, and Townsend, PC  
816 Congress Ave, STE 1900  
Austin, Texas 78701

CERTIFIED MAIL

9489 0090 0027 6009 3871 31

RE: Upper Trinity Regional Water District  
CN600639272, RN104073945  
Application No. 5778A to Amend Water Use Permit No. 5778  
Texas Water Code §§ 11.122, 11.042, Requiring Limited Mailed Notice  
Unnamed tributary of Little Elm Creek, Trinity River Basin  
Collin, Cooke, Dallas, Denton, Grayson, Tarrant, and Wise Counties

Dear Mr. Hill:

This acknowledges receipt on August 31, 2017 of the referenced application and fees in the amount of \$101.25 (Receipt No. M800038, copy enclosed).

Additional information and fees are required before the application can be declared administratively complete.

1. Specify the name of the watercourse that will be used to convey return flows from the Sandbrock Wastewater Treatment Plant (WWTP). Staff notes page 1, item 3 and page 2, item 5 of the application, (the general location map and TPDES Permit No. WQ0015536001) identify Little Elm Creek as the discharge point. However, page 1, item 4 of the Supplemental Discharge Point Information Sheet and the Supplement to Application state that the bed and banks of Doe Branch will be used to transport the Sandbrock WWTP return flows from the point of discharge to the point of diversion.
2. Provide the following additional information in support of the request to use the bed and banks of a watercourse to convey return flows from the City of Krum and the Sandbrock WWTPs for subsequent diversion and reuse:
  - a. Conveyance losses, including the method used to calculate the losses, due to transportation, evaporation (including the reservoir), seepage, channel or other associated carriage losses;
  - b. An assessment of the adequacy of the quantity and quality of the flows remaining after the proposed diversion to meet instream flow needs and bay and estuary freshwater inflow needs.

- c. Five years of historical monthly discharge data, in electronic format (spreadsheet or database), for the City of Krum WWTP.
3. Confirm that all of the return flows requested in the application originate from Lake Chapman water supplies.
4. Remit fees in the amount of \$17,465.48 as described below. Please make checks payable to the TCEQ or Texas Commission on Environmental Quality.

Filing Fee (Amendment)	\$	100.00
Recording Fee (\$1.25 x 1 page)	\$	1.25
Use Fee (\$1.00 x 17,432.64 ac-ft)	\$	17,432.64
Notice Fee (Trinity River Basin)	\$	33.84
<b>Total Fees</b>	<b>\$</b>	<b>135.09</b>
<b>Fees Received</b>	<b>\$</b>	<b>101.25</b>
<b>Fees Due</b>	<b>\$</b>	<b>17,465.48</b>

Please submit the requested information and fees by June 22, 2018, or the application may be returned pursuant to Title 30 Texas Administrative Code § 281.18.

If you have questions concerning this application, please contact me at [calvin.clary@tceq.texas.gov](mailto:calvin.clary@tceq.texas.gov) or by phone at (512) 239-4641.

Sincerely,



Calvin Clary, Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Enclosure





05-SEP-17 09:46 AM

TCEQ - A/R RECEIPT REPORT BY ACCOUNT NUMBER

<u>Fee Description</u>	<u>Fee Code</u>	<u>Account#</u>	<u>Account Name</u>	<u>Ref#1</u>	<u>Ref#2</u>	<u>Check Number</u>	<u>CC Type</u>	<u>Card Auth.</u>	<u>Tran Code</u>	<u>Slip Key</u>	<u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
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MTR USE PERMITS	WUP			M800038		33740						05-SEP-17	-\$101.25
	WUP			5778		083117	N			BS00060118	D8800010		
			WATER USE PERMITS	LLOYD		SPREDEAU	CK						
				GOSSELINK									
				ROCHELLE &									
				TOWNSEND PC									

Total (Fee Code): -\$101.25

Grand Total: -\$168.93

RECEIVED

2017 SEP -6 A 11:44

WATER AVAILABILITY DIV.

September 14, 2017

Mr. Calvin Clary  
Water Rights Permitting Team (MC 160)  
Water Rights Permitting and Availability Section  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087

**VIA FIRST-CLASS MAIL  
AND ELECTRONIC TRANSMISSION**

Re: Application to Amend Water Use Permit 5778  
Pursuant to Texas Water Code §§ 11.042(c); 11.122  
Upper Trinity Regional Water District (1601-17)

Dear Calvin:

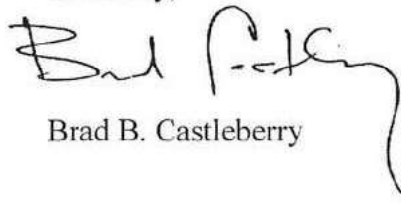
The Upper Trinity Regional Water District recently submitted an application to amend Water Use Permit 5778 (the "Application").

Please find enclosed as a supplement to the Application an updated accounting plan (the "Plan"). The enclosed materials associated with the Plan include the following:

Attachment A – A narrative describing the Plan  
Attachment B – The Excel spreadsheet of the Plan on a thumb drive

Do not hesitate to contact me at (512) 322-5856 or Ashleigh Acevedo at (512) 322-5891 if you have any questions. Thank you for your assistance with this matter.

Sincerely,



Brad B. Castleberry

BBC/plh  
7443561  
ENCLOSURES

cc: Mr. Larry Patterson  
Ms. Ronna Hartt  
Dr. Ellen T. McDonald  
Ms. Ashleigh K. Acevedo

## **Attachment A**

# UPPER TRINITY REGIONAL WATER DISTRICT REUSE OF CHAPMAN LAKE WATER ACCOUNTING PLAN DETAILED DOCUMENTATION

Last Revised: September 3, 2017

## Introduction

The purpose of this document is to provide a detailed explanation of each calculation contained in the Chapman Water Accounting Plan. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

## Input Tables

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

### **Table I-1**

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Lewisville Lake Water Surface Elevation, ft:</i>	Water surface elevation of Lewisville Lake at beginning of month, obtained from USACOE.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP</i>	Losses between RWTP intake and RWTP discharge (expressed as a percentage of intake)

FIELD	DESCRIPTION
<i>(L_RWTP):</i>	flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
<i>Doe Branch Channel Length, miles</i>	Length of Doe Branch between point of Chapman water discharge and Lewisville Lake. Updated as Lewisville Lake water surface elevation changes, using automatic lookup to Doe Branch Stream Distance Table (attached). Data in this table will be augmented by surveying or other appropriate data collection methods when water level falls below 515 ft.
<i>Doe Branch Losses (L_Doe)</i>	Computed Doe Branch losses, expressed as percentage of Chapman water entering Doe Branch. Computed as <i>Assumed Doe Branch Losses, %/mile</i> x <i>Doe Branch Channel Length, miles</i> .
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.

**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.

**Table I-3**

This spreadsheet contains all daily input of measured discharges and any direct or indirect reuse losses from all District or customer wastewater treatment plants (WWTPs) participating in the Chapman Reuse program. Average daily discharge, from each WWTP, obtained from metered values, will be entered in the appropriate cells on this table. Discharge data is only required for those WWTPs that contribute return flows subsequently used by the District as part of the program.

## Calculation Tables

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs (both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

### Table C-1

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

FIELD	COLUMN #	DESCRIPTION
<i>CLW</i>	C1-1	District's portion of Chapman Lake Water (from Table I-2, Column 2)
<i>CLW Diverted Directly to Harpool WTP</i>	C1-2	Amount of Chapman Lake water diverted directly to the future Harpool WTP (from Table I-2, Column 3)
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District's portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch (from Table I-1)
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District's portion of Chapman Lake water within Doe Branch. Computed quantity.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 7).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 6)
<i>Total CLW Available for Distribution from both WTPs (at WTP)</i>	C1-7a	Total amount of Chapman Lake water available for distribution to Chapman Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 7).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to ALL Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to all water customers. Sum of daily metered values for all water customer meters, obtained from Table I-2 (includes other water customers).



<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Total Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied to all Chapman Lake water customers. Sum of daily metered values from all Chapman water customer meters, obtained from Table I-2 (does not include other water customers).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at WTP)</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (e.g. Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water customers (referenced to discharge of WTP).

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Unutilized CLW and CLRW (at WTP)</i>	C1-11ab1	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP). (Col. [11a] + Col. [11b])
<i>Unutilized CLW and CLRW (at Lake)</i>	C1-11ab2	Amount of Chapman Lake Water and Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to intake). (Col. [11ab1]/(1-col. [6c]))
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers</i>	C1-12	Percentage of Chapman Lake water supplied to each Chapman Lake water customer. Computed quantity.
<i>Amount of Water Purchased by District from Dallas</i>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<i>Amount of Water Purchased by District from Denton</i>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<i>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</i>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake). Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<i>Chapman Lake Reuse Water used by District</i>	C1-15c	Amount of Chapman Lake Reuse Water used by District customers. Computer quantity.
<i>Available Chapman Lake Reuse Water (CLRW) (at WTP)</i>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<i>Potential CLRW Used by CL Customers</i>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] – [C1-10c]. Otherwise equal to zero.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLRW Used by CL Customers</i>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.
<i>Total Raw Water Withdrawal minus CLRW</i>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.
<i>Potential New CLW Withdrawal (only if less than CLW Demand)</i>	C1-19	Interim calculation. If [C1-18] is less than new CLW available then equal to [C1-18]. Otherwise equal to new CLW available ([C1-7a]).
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge from Customer (CWRF)</i>	C2-21	Portion of Chapman Lake water return flow in WWTP discharge attributed to this particular customer.
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer (from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake. Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRF less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRF)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.
<i>Direct/Indirect Reuse Losses</i>	C3-30	Amount of Chapman Lake water lost to direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

### Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.

Attachment B





September 14, 2017

Mr. Calvin Clary  
Water Rights Permitting Team (MC 160)  
Water Rights Permitting and Availability Section  
Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087

**VIA FIRST-CLASS MAIL**  
**AND ELECTRONIC TRANSMISSION**

Re: Application to Amend Water Use Permit 5778  
Pursuant to Texas Water Code §§ 11.042(c); 11.122  
Upper Trinity Regional Water District (1601-17)

Dear Calvin:

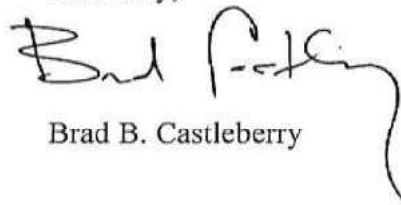
The Upper Trinity Regional Water District recently submitted an application to amend Water Use Permit 5778 (the "Application").

Please find enclosed as a supplement to the Application an updated accounting plan (the "Plan"). The enclosed materials associated with the Plan include the following:

- Attachment A – A narrative describing the Plan
- Attachment B – The Excel spreadsheet of the Plan on a thumb drive

Do not hesitate to contact me at (512) 322-5856 or Ashleigh Acevedo at (512) 322-5891 if you have any questions. Thank you for your assistance with this matter.

Sincerely,

  
Brad B. Castleberry

BBC/plh  
7443561  
ENCLOSURES

cc: Mr. Larry Patterson  
Ms. Ronna Hartt  
Dr. Ellen T. McDonald  
Ms. Ashleigh K. Acevedo

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2017 SEP 15 A 11: 21  
WATER AVAILABILITY DIV.



**Attachment A**

**UPPER TRINITY REGIONAL WATER DISTRICT  
REUSE OF CHAPMAN LAKE WATER  
ACCOUNTING PLAN DETAILED DOCUMENTATION**

Last Revised: September 3, 2017

**Introduction**

The purpose of this document is to provide a detailed explanation of each calculation contained in the Chapman Water Accounting Plan. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

**Input Tables**

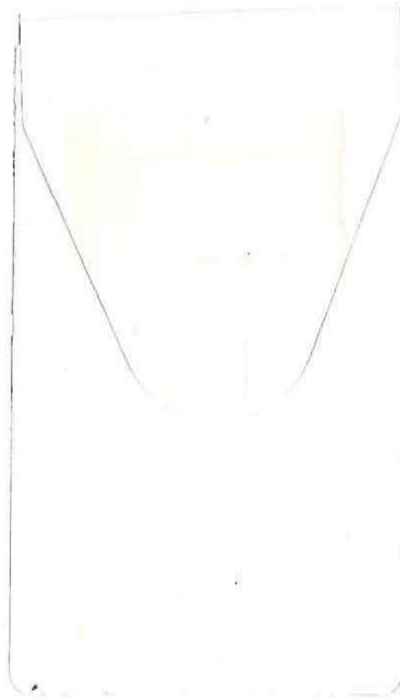
These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

**Table I-1**

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Lewisville Lake Water Surface Elevation, ft:</i>	Water surface elevation of Lewisville Lake at beginning of month, obtained from USACOE.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP</i>	Losses between RWTP intake and RWTP discharge (expressed as a percentage of intake)

**Attachment B**



Mr. Castleberry's Direct Line: (512) 322-5856  
Email: [REDACTED]

August 31, 2017

Mr. Chris Kozlowski (MC 160)  
Texas Commission on Environmental Quality  
12100 Park 35 Circle  
Building F, Room 3101  
Austin, Texas 78753

**VIA HAND DELIVERY**

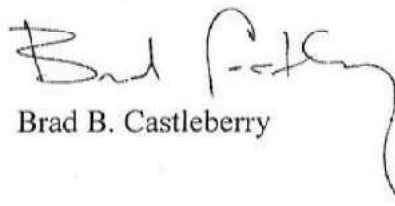
Re: Application to Amend Water Use Permit 5778  
Pursuant to Water Code §§ 11.042(c); 11.122  
Upper Trinity Regional Water District (1601-17)

Dear Chris:

Please find attached one (1) original and six (6) copies of an application to amend Water Use Permit No. 5778, which is filed on behalf of my client, the Upper Trinity Regional Water District (the "District"). Enclosed herein is my firm's check in the amount of \$101.25, which is submitted as payment for the application fees. On behalf of the District, please consider me your contact for processing this application.

We look forward to working with you and your staff in processing this application. Please do not hesitate to contact me at (512) 322-5856 or Ashleigh Acevedo at (512) 322-5891 if you have any questions.

Sincerely,

  
Brad B. Castleberry

BBC/plh  
7434251  
ENCLOSURES

cc: Mr. Larry Patterson  
Ms. Ronna Hartt  
Ms. Ellen McDonald  
Ms. Ashleigh K. Acevedo

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2017 AUG 31 P 3: 32  
WATER AVAILABILITY DIV.

Please Return to: Chris Kozlowski

Application No.:	5778
Date Check Received:	8-31-17
Check No.	33740
Check Amount:	101.25
Payor's Name:	Lloyd Gosselink - Upper Trinity Regional water
Payor's Address:	816 Congress Ave. # 1900 Austin, TX 78701
Payor's Phone No.:	512-322-5800



# Texas Commission on Environmental Quality

PO Box 13087, MC-160, Austin, Texas 78711-3087  
Telephone (512) 239-4691, FAX (512) 239-4770

## APPLICATION FOR AMENDMENT TO A WATER RIGHT

**Notice:** This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol.

**Customer Reference Number** (if issued): CN 600639272

**Note:** If you do not have a Customer Reference Number, complete Section II of the Core Data Form (TCEQ-10400) and submit it with this application.

1. Name: Upper Trinity Regional Water District  
Address: P.O. Box 305, Lewisville, Texas 75067  
Phone Number: (972) 219-1228 Fax Number: (972) 221-9896  
Email Address: Larry Patterson, [REDACTED]

2. Applicant owes fees or penalties?  
 Yes  No

3.  Permit No. 5778  Certificate of Adjudication No. \_\_\_\_\_

Stream: Unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), tributary of the Trinity River Watershed: Trinity River Basin

Reservoir (present condition, if one exists): N/A

Counties: Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant

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WATER AVAILABILITY DIV.

4. Proposed Changes To Water Right Authorizations:  
UTRWD seeks to amend the Permit to add an authorization to discharge and divert and use the bed and banks of Doe Branch to reuse Chapman Lake-derived return flows from a newly permitted wastewater treatment plant (WWTP), Sandbrock WWTP. Specifically, UTRWD seeks to add the discharge point associated with the Sandbrock WWTP to those currently specified in the Permit to divert and reuse return flows after they are passed through Lewisville Lake. Accordingly, UTRWD also seeks to modify the total appropriation of return flows to reflect updated discharges from currently listed WWTPs and the additional discharge from Sandbrock WWTP. See Supplement to Application for additional information.  
(Attach additional page as necessary, attach map/plot depicting project location, diversion point, place of use, and other pertinent data).

5. I understand the Agency may require additional information in regard to the requested amendment before considering this application.

Thomas E. Taylor  
Name (sign)

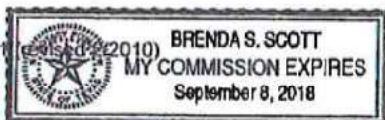
\_\_\_\_\_  
Name (sign)

THOMAS E. TAYLOR  
Name (print)

\_\_\_\_\_  
Name (print)

Subscribed and sworn to me as being true and correct before me this 30th day of AUGUST, 2017.

Brenda S. Scott  
Notary Public, State of Texas





## Supplemental Discharge Point Information Sheet

Discharge Point No. or Name: Sandbrock

1) Select the appropriate box for the source of water being discharged:

Treated effluent

Groundwater

Other \_\_\_\_\_

2) Location of discharge point will be/is at Latitude 33.269722° N, Longitude -96.915555°W, also bearing S 65.573816°W, 7589.15 feet from the NE corner of the Frederick H Pollard

Original Survey No. \_\_\_\_\_, Abstract No. 995, in Denton County, Texas.

Provide the latitude and longitude coordinates in decimal degrees, to at least six decimal places, and indicate the method used to calculate the diversion point location. (i.e., GPS Unit, USGS 7.5 Topographic Map, etc.)

Diversion point location taken from Mustang SUD application for TPDES Permit WQ0015536001 filed 11/18/2016, the Denton County Appraisal District, and geometric data plotted in the GIS Permit Map file.

3) Location from County Seat: 12.97 miles in a northeasterly direction from City of Denton, Denton County, Texas.

Location from nearby town (if other than County Seat): \_\_\_\_\_ miles in a \_\_\_\_\_ direction from \_\_\_\_\_, a nearby town shown on county highway map.

4) Zip Code: 76227

5) Water will be discharged into Little Elm Creek stream/reservoir, (tributaries) and Lake Lewisville in Segment No. 0823 in the Trinity River Basin.

6) Water will be discharged at a maximum rate of 75.42 cfs (33,854 gpm).

7) The amount of water that will be discharged is 16,801 acre-feet per year.

8) The purpose of use for the water being discharged will be Municipal and Industrial.

9) Additional information required:

For groundwater

1. Provide water quality analysis and 24 hour pump test for the well if one has been conducted.
2. Locate and label the groundwater well(s) on a USGS 7.5 Minute Topographic Map
3. Provide a copy of the groundwater well permit if it is located in a Groundwater Conservation District.
4. What aquifer the water is being pumped from?

For treated effluent

1. What is the TPDES Permit Number? WQ0015536001 Provide a copy of the permit. (See Exhibit C)
2. Provide the monthly discharge data for the past 5 years. There is not five years of data as permit was issued on July 7, 2017
3. What % of treated water was groundwater, surface water? Treated water is 100% surface water.
4. If any original water is surface water, provide the base water right number. Permit 5778

# **Supplement to Application**



**SUPPLEMENT TO  
APPLICATION TO AMEND  
WATER USE PERMIT NO. 5778**

**PURSUANT TO  
TEXAS WATER CODE §§ 11.042(c) and 11.122**

**UPPER TRINITY REGIONAL WATER DISTRICT**

In addition to the Texas Commission on Environmental Quality (“TCEQ” or the “Commission”) Application Form (Form 10201), a narrative description of the amendment to Water use Permit No. 5778 sought by Upper Trinity Regional Water District (“UTRWD”) in the Application (the “Application”) is provided in this supplement to the Application. The following documents are also attached as Exhibits:

- A. Water Use Permit No. 5778
- B. City of Krum TPDES Permit No. WQ0010729001
- C. Mustang SUD TPDES Permit No. WQ0015536001
- D. Authority to File Application
- E. Vicinity Map
- F. Photographs of Sandbrock WWTP Outfall Location
- G. Accounting Plan
- H. Application Fees

**I. Background Information**

UTRWD is a conservation and reclamation district created under Article 16, Section 59, of the Texas Constitution and is a regional water supplier to in the North Texas area. In March 2006, the Texas Commission on Environmental Quality (“TCEQ”) issued Water Use Permit No. 5778 to UTRWD, which, among other things, authorizes UTRWD to transport, divert, and reuse return flows originating from Lake Chapman (Cooper Reservoir) in the Sulphur River Basin, imported into the Trinity River Basin pursuant to Certificate of Adjudication No. 03-4797, and discharged from UTRWD- or customer- or member-owned wastewater treatment plants (“WWTPs”) into Lake Lewisville or tributaries of Lake Lewisville (the “Permit”). Particularly, pursuant to the Permit, UTRWD is authorized to reuse for municipal and industrial purposes the lesser of (1) not to exceed 9,664 acre-feet of Lake Chapman-derived return flows per year, or (2) the amount of Lake Chapman-derived return flows actually discharged, less conveyance losses. A copy of the Permit is attached hereto as **Exhibit A**.

The Permit identifies the WWTPs discharging return flows that UTRWD is authorized to reuse, and among those is the City of Krum’s WWTP, Texas Pollutant Discharge Elimination System (“TPDES”) Permit No. WQ0010729001. Since the Permit was issued, TCEQ has issued a major amendment to the TPDES Permit No. WQ0010729001, which authorized the City of Krum to increase its maximum permitted discharge of 0.70 million gallons per day (“MGD”) to 0.137 MGD. A copy of TPDES Permit No. WQ0010729001 is attached hereto as **Exhibit B**.

Additionally, on July 7, 2017, TCEQ issued a new TPDES permit to Mustang Special Utility District (“Mustang SUD”), TPDES Permit No. WQ0015536001, whereby Mustang SUD is authorized to discharge not to exceed 15.0 million gallons per day of treated domestic effluent into a tributary of Lake Lewisville from the Sandbrock WWTP. These return flows are Lake Chapman-derived. A copy of TPDES Permit No. WQ0015536001 is attached hereto as **Exhibit C**.

By this Application, UTRWD is seeking to amend the Permit to authorize UTRWD to divert and reuse all return flows from the Krum WWTP in accordance with the recently amended TPDES permit underlying those discharges. In addition, UTRWD is seeking to amend the Permit to add an authorization to divert and reuse all return flows from the new Sandbrock WWTP and an authorization to use the bed and banks of Doe Branch to divert and reuse such return flows.

## **II. Applicant Information**

Name of Applicant: Upper Trinity Regional Water District  
Address: P.O. Box 305, Lewisville, Texas 75067  
Principal Contact: Larry N. Patterson  
Telephone: (972) 219-1228  
Fax: (972) 221-9896

## **III. Authorization for Filing Application**

On or about August 3, 2017, the UTRWD’s Board of Directors adopted a resolution authorizing the filing of the Application. A copy of the resolution is attached hereto as **Exhibit D**. By this Application, the District seeks to amend its water right to increase the amount of return flows UTRWD is authorized to divert and reuse from the City of Krum’s WWTP in accordance with the recent amendment to the underlying TPDES permit and to add an authorization for UTRWD to discharge and divert and use the bed and banks of Doe Branch to reuse all return flows from Mustang SUD’s newly issued TPDES permit for the Sandbrock WWTP.

## **IV. Source of Supply**

The source of water associated with this Application is Lake Chapman-derived return flows discharged from the existing outfall at the City of Krum WWTP and the newly-permitted outfall at Mustang SUD’s Sandbrock WWTP. The location of all discharge points associated with the Permit are detailed on the vicinity map, which is attached hereto as **Exhibit E**. Photographs that depict the location of the Sandbrock WWTP outfall location were excerpted from the Mustang SUD application for the Sandbrock WWTP and are attached hereto as **Exhibit F**.

## **V. Amount and Purpose of Diversion and Use**

By this Application, UTRWD seeks to amend the Permit to reflect the newly-permitted discharges into Lake Lewisville and tributaries of Lake Lewisville. Specifically, UTRWD seeks

to amend the permitted average daily flow from the City of Krum’s WWTP to reflect the recent increase from 0.137 MGD to 0.70 MGD. Additionally, UTRWD seeks to add to the Permit the return flows associated with the newly permitted discharge at Mustang SUD’s Sandbrock WWTP up to the permitted daily average flow of 15.0 MGD.

UTRWD does not seek to amend the Permit to increase the total amount of return flows UTRWD is authorized to reuse (9,664 acre-feet per year). Rather, UTRWD seeks to amend the Permit to identify additional discharges from which those return flows can be derived. Thus, UTRWD will continue to divert the lesser of the total 9,664 acre-feet per year or that portion of 9,664 acre-feet that is actually discharged less conveyance losses and determined to be available to diversion and reuse in accordance with the UTRWD accounting plan, as described in the Permit (the “Accounting Plan”). As required by the Permit, the Accounting Plan tracks i) actual quantities of Lake Chapman water imported into the basin; and ii) the actual amount of return flows originally sourced by Lake Chapman-derived water discharged by UTRWD and member or customer WWTPs. An updated Accounting Plan is attached hereto as **Exhibit G**.

**VI. Diversion Information**

UTRWD does not seek to amend its current authorization to divert from the Joint Lewisville/UTRWD Intake Structure at a rate not to exceed 43.2 MGD.

**VII. Return and Surplus Water**

UTRWD seeks authorization to reuse the return flows that will be associated with the increased discharge from the City of Krum’s WWTP and the new discharge from Mustang SUD’s Sandbrock WWTP , so that existing and future water rights holders will not come to rely upon the availability of such return flows from this source.

Any surplus waters not reused will be returned to the Trinity River Basin.

**VIII. Authorization to Use Bed and Banks Pursuant to Texas Water Code § 11.042(c)**

UTRWD requests authorization to use the bed and banks of Doe Branch and then tributaries of the Trinity River to transport return flows from the Sandbrock TPDES discharge point to UTRWD’s diversion point and for the additional, increased discharge of 631 acre-feet per year from the previously authorized Krum discharge point.

**IX. Water Conservation, Drought Contingency and Avoidance of Waste**

UTRWD has adopted a Water Conservation and Drought Contingency Plan that has been submitted to and approved by TCEQ pursuant to the requirements of 30 Texas Administrative Code (“TAC”) Chapter 288. A copy of UTRWD’s Water Conservation and Drought Contingency Plan is on file with TCEQ.

As defined in Texas Water Code § 11.002(8) (and mirrored in 30 TAC § 295.9), “conservation” means those practices that will “reduce the consumption of water, reduce the loss or waste of water, *improve the efficiency in the use of water, or increase the recycling and reuse*

of water so that a water supply is made available for future or alternative uses.” [emphasis added]. By granting the Application, UTRWD will have the flexibility to more efficiently utilize its water supplies. Such efficiency, along with UTRWD’s water conservation and drought contingency plan, will allow UTRWD to address current and future water supply needs in this area of the state in a manner that will allow the avoidance of waste and the achievement of water conservation.

**X. Notice**

Pursuant to Section 11.132 of the Texas Water Code and 30 TAC 295.158, notice must be given to persons who, in the judgment of TCEQ, may be affected by the Application. Additionally, on June 9, 2006, the Texas Supreme Court ruled on the issue of whether notice and an opportunity for a contested case hearing are required when a proposed water right amendment does not seek to increase the amount of water authorized to be diverted or the rate at which such water is authorized to be diverted.<sup>1</sup> In its ruling, the Court identified several “limited public interest criteria” that the agency must assess in determining whether to issue notice on an application to amend a water right.<sup>2</sup> Based on the Application’s evaluation of such criteria, as detailed herein, no mailed or published notice is required for the Application.

*a. Beneficial Use*

Texas Water Code § 11.134(b)(3)(A) requires that proposed appropriations of water be intended for a beneficial use. The “beneficial use” of water is defined in Texas Water Code § 11.002(4) and 30 TAC § 297.1(8) as the use of water “which is economically necessary for a purpose authorized by [Chapter 11 of the Texas Water Code].” Through this Application, UTRWD seeks to appropriate UTRWD return flows for municipal and industrial purposes.

A “municipal” purpose of use is identified in Texas Water Code § 11.023 as a purpose for which water may be diverted and beneficially use and is defined in 30 TAC § 297.1(32) to include “the use of potable water within a community or municipality and its environs for domestic, recreation, commercial, or industrial purposes or for the water of golf courses, parks and parkways, or the use of reclaimed water in lieu of potable water for the preceding purposes.” An “industrial” purpose of use is identified in Texas Water Code § 11.023 as a purpose for which water may be diverted and beneficially used and is defined in 30 TAC § 297.1(24) to include “the use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value.”

As currently authorized by the Permit, UTRWD will continue to reuse the Lake Chapman-derived return flows for municipal supply and industrial use to meet the demands of the growing population within the UTRWD service area.

*b. Public Welfare*

The proposed amendment will allow UTRWD to provide water for beneficial uses, as defined by the Texas Water Code. Such action is not detrimental to the public welfare. Indeed,

---

<sup>1</sup> See *City of Marshall v. City of Uncertain*, 206 S.W. 3d 97 (Tex. 2006).

<sup>2</sup> *City of Marshall*, 206 S.W.3d at 110.



the appropriation will benefit the public welfare as it will allow UTRWD to more efficiently utilize its existing water supplies to address future demands for water in this part of the state. As discussed in further detail, below, Region C is expected to have a significant increase in population and a corresponding increase in demand for water. Allowing UTRWD to appropriate its return flows so as to meet the future demands for water will benefit the public welfare. Additionally, the Application, if granted, will not have significant environmental impacts and will have no impact on existing water rights.

*c. Consistency with State and Regional Water Plans*

The project area for the Application is located within the Region C Planning Area (“Region C”), as noted in the 2017 State Water Plan, *Water for Texas*. The Application is consistent with the 2017 State Water Plan, which supports reuse and identifies it as a water source: “The increase in reuse existing supply is primarily due to an increase in wastewater flows associated with an increasing population and the capacity of existing reuse facilities.”<sup>3</sup> The Region C Water Plan also recognizes reuse of treated wastewater effluent as an increasingly important source of water, with the Region projecting 121,000 acre-feet of reuse as a water supply in 2020, and then 361,000 acre-feet by 2070.<sup>4</sup> Additionally, the Region C Water Plan specifically identifies reuse pursuant to the Permit as a current water management strategy.<sup>5</sup>

Furthermore, according to the 2017 State Water Plan, the population in Region C is expected to increase ninety-one percent (91%) between 2020 and 2070.<sup>6</sup> By 2070, the total water demands for the region are projected to increase 71%. Based on the increasing population and corresponding increase in municipal demands for water, allowing the Application will provide UTRWD with another source of water to meet this increasing demand in a manner that is consistent with both the State and Region C Water Plans.

*d. Groundwater Assessment*

There is no significant connection, if any, between groundwater resources or groundwater recharge and UTRWD’s Application to appropriate surface water-based return flows. The additional water sought for reuse by the Application results from the use of surface water supplies granted pursuant to the Permit. Thus, the appropriation of surface water-based return flows by the Application will not adversely affect groundwater resources and groundwater recharge. Instead, by allowing the reuse of surface water as a water management strategy, future reliance on groundwater as a source of supply may be decreased.

*e. Impacts on Other Water Rights Holders or the Environment*

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<sup>3</sup> *Id.* at 72.

<sup>4</sup> Texas Water Development Board, 2017 State Water Plan: *Summary of the 2016 Region C Regional Water Plan* p. C-4, available at [http://www.twdb.texas.gov/waterplanning/swp/2017/doc/2016\\_RegionalSummary\\_C.pdf](http://www.twdb.texas.gov/waterplanning/swp/2017/doc/2016_RegionalSummary_C.pdf) (last visited August 8, 2017).

<sup>5</sup> *Id.* at 5E-26 – 5E-36.

<sup>6</sup> Texas Water Development Board, 2017 State Water Plan, *Water for Texas, Summary of the 2016 Region C Regional Water Plan* p. C-3, available at [http://www.twdb.texas.gov/waterplanning/swp/2017/doc/2016\\_RegionalSummary\\_C.pdf](http://www.twdb.texas.gov/waterplanning/swp/2017/doc/2016_RegionalSummary_C.pdf) (last visited August 8, 2017).

Currently, the return flows requested to be added by this Application are unappropriated. Therefore, no one currently owns the rights to the requested return flows, and thus cannot be impacted by granting UTRWD's requested authorizations. Moreover, UTRWD is seeking to appropriate the full amount of permitted return flows, thus ensuring that any increase in the actual discharges made by the holders of the TPDES permits are covered pursuant to this Application. As such, existing and future water rights holders will not come to rely upon the availability of such return flows from this source.

The authorization to reuse return flows related to the Sandbrock WWTP discharges will have no environmental impact because the WWTP is yet to be constructed and thus has yet to discharge any Lake Chapman-derived water into the basin. Therefore, UTRWD's reuse of return flows associated with discharge from that facility will have no impact on the environment. Similarly, reuse of the increased return flows authorized for the City of Krum's WWTP will have no environmental impact because UTRWD seeks to reuse return flows that were not otherwise available to for environmental purposes. Moreover, the City of Krum's return flows have already been authorized for reuse purposes, so any environmental impacts associated with such reuse has already been fully evaluated and approved.

*f. Availability of Unappropriated Water*

The return flows sought by UTRWD pursuant to this Application are currently unappropriated. Thus, the total amount of return flows sought by UTRWD is available.

**XI. Administrative Requirements and Fees**

This Application provides relevant information to address the administrative requirements of 30 Texas Administrative Code § 295, Subchapter A and the requirements of Texas Water Code Chapter 11. In accordance with 30 TAC § 295.131 and other TCEQ rules relating to fees, UTRWD is submitting with this Application payment of \$101.25, which is attached as **Exhibit H**. With the filing of this Application, UTRWD requests a determination of any additional fees that may be required. Upon receipt of such determination, UTRWD will forward such fees to the TCEQ.

# **Exhibit A**

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



This is a true and correct copy of a  
 Texas Commission on Environmental Quality document,  
 which is filed in the permanent records of the Commission.  
 Given under my hand and the seal of office on

*[Signature]* MAR 14 2006

WATER USE PERMIT  
Under the authority of the Texas Commission on Environmental Quality

APPLICATION NO. 5778	PERMIT NO. 5778	TYPE Secs. 11.121 & 11.042
Owner: Upper Trinity Regional Water District	Address: 900 N. Kealy Street P.O. Drawer 305 Lewisville, Texas 75067	
Filed: May 28, 2002	Granted: MAR 03 2006	
Purpose: Municipal and Industrial	Counties: Denton, Collin, Grayson, Cooke, Wise, Dallas, and Tarrant	
Watercourse: An unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, and Ranger Branch, tributaries of the Elm Fork Trinity River (Lake Lewisville), tributary of the Trinity River	Watershed: Trinity River Basin	

WHEREAS, the Upper Trinity Regional Water District (UTRWD) has applied for a Water Use Permit to convey and reuse, within UTRWD's service area in the Trinity River Basin, up to 9,664 acre-feet per annum of treated effluent return flows derived from water purchased from the City of Commerce, diverted from Lake Chapman (formerly Cooper Reservoir) in the Sulphur River Basin, and conveyed to the Trinity River Basin as authorized by Certificate of Adjudication No. 03-4797; and

WHEREAS, pursuant to a water supply contract dated July 5, 1990, between the City of Commerce and the UTRWD, the City of Commerce agrees to supply water from Lake Chapman in the Sulphur River Basin to UTRWD for a period of 50 years with options available thereafter for the City to terminate all or portions of the contract; and

WHEREAS, pursuant to the interbasin transfer of water authorized by Certificate of Adjudication No. 03-4797, the UTRWD acquired the right to transport up to 16,106 acre-feet of water per year from Lake Chapman in the Sulphur River Basin to the Trinity River Basin for municipal and industrial uses within the UTRWD's service area; and



WHEREAS, UTRWD has entered into agreements with the Cities of Dallas, Denton and Lewisville, including:

- 1) the August 24, 1998 Agreement between UTRWD and the Cities of Denton and Lewisville entitled, "Upper Trinity Regional Water District Agreement with the City of Denton and City of Lewisville Concerning Water from Cooper (Chapman) Lake," and
- 2) the June 19, 2003 Agreement between UTRWD and Dallas entitled, "Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lake Lewisville for Pass Through of Chapman Lake Water," and
- 3) the August 19, 2003 agreement between UTRWD and the cities of Denton and Lewisville entitled "Addendum to Contract between City of Denton, Upper Trinity Regional Water District and City of Lewisville, Concerning Reuse of Water from Cooper (Chapman) Lake,"

which agreements are collectively referred to herein as "the Pass-Through Agreements" and which agreements allow UTRWD to pass Lake Chapman water, including Lake Chapman-derived return flows, through Lake Lewisville before diversion and use by UTRWD on the subsequent day, with express limitations; and

WHEREAS, pursuant to the Pass-Through Agreements, UTRWD seeks authorization to reuse not more than 60% of the volume of Lake Chapman water delivered to the Trinity River Basin, utilizing a single reuse and pass-through cycle for the reclaimed water; and

WHEREAS, UTRWD provided to the Executive Director an "Accounting Plan," in accordance with the Pass-Through Agreements that accounts for by source all water diverted from Lake Lewisville pursuant to all of the UTRWD's authorizations, including any and all reuse water; and

WHEREAS, UTRWD indicates it will use actual discharge measurements and the Accounting Plan to identify Lake Chapman-derived return flows which will be available for transport, diversion and reuse pursuant to this permit; and

WHEREAS, pursuant to the Pass-Through Agreements, UTRWD seeks authorization to reuse the quantity of Lake Chapman-derived return flows available for transport, diversion and use according to the Accounting Plan by conveying such return flows from wastewater treatment plants (WWTPs) operated or used by the UTRWD or its customers that discharge into either Lake Lewisville or tributaries of Lake Lewisville; and

WHEREAS, the WWTPs on or upstream of Lake Lewisville include the following:

WWTP	LATITUDE/ LONGITUDE	PERMITTED AVERAGE DAILY FLOW (Million Gallons/Day)	DISCHARGES TO
Celina	33.333° N/96.792° W	0.950 MGD	Unnamed tributary of Little Elm Creek, tributary of Lake Lewisville
Lakeview Regional	33.138° N/97.014° W	7.500 MGD	Lake Lewisville
Doe Branch (Eastside)	33.218° N/96.901° W	5.225 MGD	Doe Branch, tributary of Lake Lewisville
Riverbend	33.229° N/96.932° W	5.700 MGD	Little Elm Creek, tributary of Lake Lewisville
Peninsula	33.209° N/96.990° W	2.000 MGD	Cantrell Slough, tributary of Lake Lewisville
Krum	33.250° N/97.246° W	0.137 MGD	North Hickory Creek, tributary of Lake Lewisville
Sanger	33.363° N/97.163° W	0.980 MGD	Ranger Branch, tributary of Lake Lewisville

WHEREAS, UTRWD has entered into a contract with the City of Denton dated July 21, 1992, and entitled "CONTRACT FOR WATER TREATMENT AND TRANSMISSION SERVICES", whereby the City of Denton provides treated water service to the City of Sanger and the City of Krum only until such time as UTRWD commences direct service to such cities, including by supply of water from Lake Chapman; and

WHEREAS, UTRWD seeks authorization to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Ranger Branch, all tributaries of the Elm Fork Trinity River upstream of the Lake Lewisville dam, and Lake Lewisville on the Elm Fork Trinity River to convey a combined total of 22.492 MGD (33.735 cfs) of Lake Chapman-derived return flows from the seven identified upstream WWTPs to UTRWD's existing diversion facilities on Lake Lewisville, known as the "Joint Lewisville / UTRWD Intake Structure" at the Lake Lewisville dam; and

WHEREAS, UTRWD seeks authorization to divert the Lake Chapman-derived return flows requested in the application from the Joint Lewisville / UTRWD Intake Structure; and

WHEREAS, UTRWD states that the diversion rate of Lake-Chapman derived return flows from the Joint Lewisville / UTRWD Intake Structure will not exceed a peak daily rate of more than 43.2 MGD; and

WHEREAS, UTRWD indicates its reuse of Lake Chapman-derived return flows will not include water derived from other sources, and that any of the Lake Chapman-derived return flows not consumptively used will be returned to Lake Lewisville; and

WHEREAS, UTRWD'S application for this permit was declared administratively complete by the Executive Director on May 28, 2002; and

WHEREAS, the Texas Commission on Environmental Quality (Commission) finds that jurisdiction over the application is established; and

WHEREAS, requests for a contested case hearing were received from the City of Denton and the City of Dallas and were withdrawn based on a settlement of the parties for issuance of this permit consistent with the Pass-Through Agreements and the Accounting Plan; and

WHEREAS, the Executive Director has determined that, in order to protect existing water rights and aquatic habitat in the Trinity River Basin, a special condition limiting UTRWD's diversion and use of water in accordance with the Accounting Plan, be included in the permit; and

WHEREAS, the Executive Director has determined that existing water rights will not be impacted by the discharge, conveyance, and diversion of UTRWD's Lake Chapman-derived return flows if appropriate accounting is made pursuant to the Accounting Plan to prohibit UTRWD from diverting return flows that physically and legally would have been available for impoundment, diversion, and use by water rights issued prior to the filing of this application; and

WHEREAS, the Executive Director has determined that this permit will have no impact on the existing instream uses of Lake Lewisville or its tributaries and that no special conditions to address environmental issues are needed; and

WHEREAS, the Commission has complied with the requirements of the Texas Water Code and Rules of the Texas Commission on Environmental Quality in issuing this permit.

NOW, THEREFORE, Water Use Permit No. 5778 is issued to the Upper Trinity Regional Water District, subject to the following terms and conditions:

1. USE

- A. UTRWD is authorized to reuse, within its service area in the Trinity River Basin for municipal and industrial purposes, the lesser of:
- 1) not to exceed 9,664 acre-feet of Lake-Chapman-derived return flows per year (which represents 60% of the maximum volume of Lake Chapman water delivered to the Trinity River Basin for first use by UTRWD as authorized by Certificate of Adjudication No. 03-4797); or
  - 2) the amount of Lake Chapman-derived return flows actually discharged less conveyance losses and as determined to be available for diversion and reuse by UTRWD according to the Accounting Plan described in Paragraph 6. SPECIAL CONDITIONS.
- B. For delivery of water authorized to be used pursuant to Paragraph 1.A. USE and at the maximum rates identified in Paragraph 2. DISCHARGE POINTS AND RATES, UTRWD is authorized to use the bed and banks of an unnamed tributary of Little Elm Creek, Little Elm Creek, Doe Branch, Cantrell Slough, North Hickory Creek, Ranger Branch, tributaries of the Elm Fork Trinity River upstream of the Lake Lewisville dam, and Lake Lewisville on the Elm Fork Trinity River to convey Lake Chapman-derived treated effluent from the Celina, Lakeview Regional, Doe Branch (Eastside), Riverbend, Peninsula, Krum, and Sanger WWTPs operated or used by the UTRWD or its customers to the Joint Lewisville / UTRWD Intake Structure.

2. DISCHARGE POINTS AND RATES

- A. Celina WWTP - Latitude 33.333°N Longitude 96.792°W, on an unnamed tributary of Little Elm Creek, tributary of Lake Lewisville at 0.950 MGD.
- B. Lakeview Regional WWTP - Latitude 33.138°N, Longitude 97.014°W into Lake Lewisville at 7.500 MGD.
- C. Doe Branch (Eastside) WWTP - Latitude 33.218°N Longitude 96.901°W on Doe Branch, tributary of Lake Lewisville at 5.225 MGD.
- D. Riverbend WWTP - Latitude 33.229°N, Longitude 96.932°W on Little Elm Creek, tributary of Lake Lewisville at 5.700 MGD.
- E. Peninsula WWTP - Latitude 33.209°N, Longitude 96.990°W on Cantrell Slough, tributary of Lake Lewisville at 2.000 MGD.

F. Krum WWTP - Latitude 33.250°N, 97.246°W on North Hickory Creek, tributary of Lake Lewisville at 0.137 MGD.

G. Sanger WWTP - Latitude 33.363°N, Longitude 97.163°W on Ranger Branch, tributary of Lake Lewisville at 0.980 MGD.

### 3. DIVERSION

UTRWD is authorized to divert water associated with this permit at a maximum rate of not to exceed 43.2 MGD from the Joint Lewisville / UTRWD Intake Structure, pursuant to the Pass-Through Agreements. All diversions of water authorized by this permit are limited to the quantity of water calculated in accordance to the Accounting Plan.

### 4. TIME PRIORITY

The time priority for the bed and banks authorization of this permit is May 28, 2002, however, the return flow generated from the Lake Chapman water transferred from the Sulphur River Basin to the Trinity River Basin is not subject to priority call by senior and superior water rights owners in the Trinity River Basin.

### 5. CONSERVATION

UTRWD shall implement water conservation plans that provide for the utilization of those practices, techniques, and technologies that reduce or maintain the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water, so that a water supply is made available for future or alternative uses. Such plans shall include a requirement that in every wholesale water contract entered into, on or after the effective date of this permit, including any contract extension or renewal, that each successive wholesale customer develop and implement conservation measures. If the customer intends to resell the water, then the contract for resale of the water must have water conservation requirements so that each successive wholesale customer in the resale of the water be required to implement water conservation measures.

### 6. SPECIAL CONDITIONS

A. This permit is issued pursuant to and contingent upon the maintenance of a valid water supply contract between UTRWD and the City of Commerce, and this permit will become null and void and of no further force or effect upon the expiration of such a contract.

B. UTRWD's rights under this permit shall be exercised in accordance with the following Pass-Through Agreements:

- 1) the August 24, 1998 Agreement between UTRWD and the Cities of Denton and Lewisville, entitled "Upper Trinity Regional Water District Agreement with the City of Denton and City of Lewisville Concerning Water from Cooper (Chapman) Lake," and
- 2) the June 19, 2003 Agreement between UTRWD and Dallas, entitled "Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lake Lewisville for Pass Through of Chapman Lake Water," and
- 3) the August 19, 2003 agreement between UTRWD and the cities of Denton and Lewisville, entitled "Addendum to Contract between City of Denton, Upper Trinity Regional Water District and City of Lewisville, Concerning Reuse of Water from Cooper (Chapman) Lake."

This permit does not limit, amend, revoke, enlarge upon or modify any term or condition of the Pass-Through Agreements.

C. This permit will become null and void and of no further force or effect upon the expiration or sooner termination of either the agreement identified in Paragraph 6.B. SPECIAL CONDITIONS, as the August 24, 1998 Agreement, entitled "Upper Trinity Regional Water District Agreement with the City of Denton and City of Lewisville Concerning Water from Cooper (Chapman) Lake," or the August 19, 2003 agreement, identified in Paragraph 6.B. SPECIAL CONDITIONS as the "Addendum to Contract between City of Denton, Upper Trinity Regional Water District and City of Lewisville, Concerning Reuse of Water from Cooper (Chapman) Lake," which addendum incorporates the provisions, terms and conditions in the June 19, 2003 agreement between UTRWD and Dallas, also identified in Paragraph 6.B. SPECIAL CONDITIONS.

D. Transport, diversion and use of Lake Chapman-derived return flows pursuant to this permit are subject to the June 19, 2003 agreement described in Paragraph 6.B. SPECIAL CONDITIONS entitled "Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lake Lewisville for Pass Through of Chapman Lake Water."

E. UTRWD may only divert Lake Chapman-derived return flows from Lake Lewisville, Trinity River Basin, pursuant to the Accounting Plan, as subject to modification from time to time in accordance with the Pass-Through Agreements. Among other things, the Accounting Plan includes key elements of a water accounting system to:



- 1) account for, by priority, date and source, all water discharged into and diverted from Lake Lewisville pursuant to all of the District's authorizations; and
  - 2) measure daily discharges and adjust available amounts by conveyance losses; and
  - 3) limit the identification of discharges as being of Lake Chapman-derived return flows, as specified in the Accounting Plan; and
  - 4) utilize a single reuse and pass-through cycle for Lake Chapman-derived return flows, as specified in the Accounting Plan; and
  - 5) allow diversion and use by UTRWD of Lake Chapman-derived return flows passing through Lake Lewisville, no later than the subsequent day following actual discharge of such effluent, as specified in the Accounting Plan.
- F. UTRWD may not, while the Cities of Krum and Sanger are connected to the municipal water supply system of the City of Denton, identify in the Accounting Plan any discharges from the Krum and Sanger WWTPs as Lake Chapman-derived return flows available for diversion and use by UTRWD.
- G. Prior to diversion of the water authorized herein, UTRWD shall ensure the installation and maintenance of a measuring device at the discharge point of each WWTP discharging Lake Chapman-derived treated effluent capable of measuring within plus or minus 5% accuracy and recording the amount of such treated water discharges for conveyance downstream to the Joint Lewisville / UTRWD Intake Structure.
- H. UTRWD shall maintain electronic records, in spreadsheet or database format, of all data required to implement the Accounting Plan and make same available to the public during normal business hours. UTRWD shall submit such records to the Executive Director upon request.
- I. Prior to the diversion and use of future increased discharges of treated effluent from the wastewater treatment plants identified in this Permit, UTRWD must apply for and be granted the authority to divert and use the increased amount of discharged water.

This permit is issued subject to all superior and senior water rights in the Trinity River Basin.

Permittee agrees to be bound by the terms, conditions and provisions contained herein and such agreement is a condition precedent to the granting of this permit.

All other matters requested in the application which are not specifically granted by this permit are denied.

This permit is issued subject to the Rules of the Texas Commission on Environmental Quality and to the right of continuing supervision of State water resources exercised by the Commission.

TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

A handwritten signature in black ink, appearing to read "Manuel P. Lujan", is written over a horizontal line. The signature is cursive and includes a small mark resembling a checkmark or a stylized flourish at the end.

For the Commission

DATE ISSUED: MAR 03 2006



# **Exhibit B**



TPDES PERMIT NO.  
WQ0010729001  
[For TCEQ office use only - EPA I.D.  
No. TX0024198]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

This is a renewal that replaces TPDES  
Permit No. WQ0010729001 issued on  
August 20, 2013.

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

City of Krum

whose mailing address is

146 West McCart Street  
Krum, Texas 76249

is authorized to treat and discharge wastes from the City of Krum Wastewater Treatment Facility, SIC  
Code 4952

located on the east side of North Hickory Creek, approximately 0.6 mile southwest of the intersection of  
Farm-to-Market Road 156 and Farm-to-Market Road 1173, in Denton County, Texas 76249

to North Hickory Creek; thence to Hickory Creek; thence to Lewisville Lake in Segment No. 0823 of the  
Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth in this  
permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the  
State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the  
permittee the right to use private or public property for conveyance of wastewater along the discharge  
route described in this permit. This includes, but is not limited to, property belonging to any individual,  
partnership, corporation or other entity. Neither does this permit authorize any invasion of personal  
rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the  
permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **October 1, 2021**.

ISSUED DATE: December 13, 20106

  
For the Commission

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of the expansion to the 0.70 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.35 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 854 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Max. Measurement Frequency	Single Grab Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (29)	15	25	35	One/week	Grab
Total Suspended Solids	15 (44)	25	40	60	One/week	Grab
Ammonia Nitrogen	3 (8.8)	6	10	15	One/week	Grab
Total Phosphorus	1 (2.9)	2	4	6	One/week	Grab
<i>E. coli</i> , colony forming units or most probable number per 100 ml	126	N/A	N/A	399	Five/week	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of the expansion to the 0.70 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.70 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 1,702 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (58)	15	25	35	One/week	Composite
Total Suspended Solids	15 (88)	25	40	60	One/week	Composite
Ammonia Nitrogen	3 (18)	6	10	15	One/week	Composite
Total Phosphorus	1 (5.8)	2	4	6	One/week	Composite
<i>E. coli</i> , colony forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain minimum dissolved oxygen of 4.0 mg/l and shall be monitored once per week by grab sample.

**DEFINITIONS AND STANDARD PERMIT CONDITIONS**

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

**1. Flow Measurements**

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

**2. Concentration Measurements**

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).



- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the Enforcement Division (MC 224), by the 20<sup>th</sup> day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Effective December 21, 2016, monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later



than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective September 1, 2020, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All POTWs must provide adequate notice to the Executive Director of the following:
  - a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
  - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
  - c. For the purpose of this paragraph, adequate notice shall include information on:
    - i. The quality and quantity of effluent introduced into the POTW; and
    - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
  - g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
  - h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
  - i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).
3. Inspections and Entry
- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
  - b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.



## 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be

modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;



- ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
  - iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
- i. the name of the permittee and the permit number(s);
  - ii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iii. the date of filing of the petition.

### **OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).
7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 169) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.



- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
    - c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Environmental Cleanup Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

- d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
- e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
  - i. Volume of waste and date(s) generated from treatment process;
  - ii. Volume of waste disposed of on-site or shipped off-site;
  - iii. Date(s) of disposal;
  - iv. Identity of hauler or transporter;
  - v. Location of disposal site; and
  - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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**SLUDGE PROVISIONS**

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Sewage Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

**SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION****A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

**B. Testing Requirements**

1. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B pathogen requirements.

- a. For sewage sludge to be classified as Class A with respect to pathogens, the density of fecal coliform in the sewage sludge be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information.



Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB with respect to pathogens, the density of fecal coliform in the sewage sludge be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB sewage sludge may be classified a Class A sewage sludge if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B criteria for

sewage sludge.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a

single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.

- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.

#### 4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been



treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Sewage sludge shall be injected below the surface of the land.
  - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When sewage sludge that is incorporated into the soil is Class A or Class AB with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

- Toxicity Characteristic Leaching Procedure (TCLP) Test - once during the term of this permit
- PCBs - once during the term of this permit

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) *The amount of bulk sewage sludge applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella sp.*, and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (*e.g.*, sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (*e.g.*, beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (*e.g.*, centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	<u>Cumulative Pollutant Loading Rate (pounds per acre)*</u>
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

**D. Notification Requirements**

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk sewage sludge will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

**E. Record keeping Requirements**

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at



the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B sludge, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.
  - c. The number of acres in each site on which bulk sludge is applied.
  - d. The date and time sludge is applied to each site.

- e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
- f. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

## F. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (*e.g.*, sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (*e.g.*, beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (*e.g.*, centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.



14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella sp.*, and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.
16. Amount of sludge transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk sewage sludge is applied.
  - c. The date and time bulk sewage sludge is applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
  - e. The amount of sewage sludge (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE  
DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.
- D. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.



1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (*e.g.*, sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (*e.g.*, beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (*e.g.*, centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge production in dry tons/year.
4. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge transported interstate in dry tons/year.
6. A certification that the sewage sludge meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION IV. REQUIREMENTS APPLYING TO SLUDGE TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge that is transported to another wastewater treatment facility or facility that further processes sludge. These provisions are intended to allow transport of sludge to facilities that have been authorized to accept sludge. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge, nor do they limit the ability of the receiving facility to request additional testing or documentation.

**A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge may only be transported using a registered transporter or using an approved pipeline.

**B. Record Keeping Requirements**

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge.
2. For sludge transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

**C. Reporting Requirements**

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (*e.g.*, sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (*e.g.*, beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (*e.g.*, centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge production;
3. the amount of sludge transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

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**OTHER REQUIREMENTS**

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category C facility must be operated by a chief operator or an operator holding a Category C license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. The permittee is hereby placed on notice that this permit may be reviewed by the TCEQ after the completion of any new intensive water quality survey on Segment No. 0823 of the Trinity River Basin and any subsequent updating of the water quality model for Segment No. 0823, to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC § 305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TCEQ Continuing Planning Process.
4. The permittee shall provide nuisance odor prevention for both phases of the permit in accordance with 30 TAC § 309.13(e)(2). A nuisance odor prevention plan was submitted to the TCEQ on July 18, 2011 and approved on July 26, 2011 (log # 0711/039). The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). (See Attachment A.)
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, 5/week may be reduced to 3/week in the Interim phase and daily may be reduced to 5/week in the Final phase. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last

violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.

7. The permittee has submitted plans and specifications to the Texas Water Development Board (TWDB), which were approved by the TWDB on December 10, 2013 (on file). The TCEQ will accept the TWDB approval as fulfilling the requirement for a summary transmittal letter in accordance with the requirements in 30 TAC § 217.6(d), as was required in the permit issued on August 20, 2013.
8. The permittee shall notify the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five (45) days prior to the completion of the Final phase facilities on Notification of Completion Form 20007.
9. **The permittee shall comply with these requirements prior to the use of the southeastern pond as an equalization basin.**

A. Facilities for the retention of treated or untreated wastewater shall be adequately lined to control seepage. The following methods of pond lining are acceptable.

- a. In-situ clay soils or placed and compacted clay soils meeting the following requirements:
  - 1) More than 30% passing a No. 200 mesh sieve
  - 2) Liquid limit greater than 30%
  - 3) Plasticity index greater than 15
  - 4) A minimum thickness of 2 feet
  - 5) Permeability equal to or less than  $1 \times 10^{-7}$  cm/sec (\*)
  - 6) Soil compaction will be 95% standard proctor at optimum moisture content (\*)
- (\*) For new and modified ponds only.
- b. Membrane lining with a minimum thickness of 20 mils, and an underdrain leak detection system.
- c. An alternate method of pond lining may be utilized with prior approval from the Executive Director.

The permittee shall furnish certification by a Texas Licensed Professional Engineer that the completed pond lining meets the appropriate criteria above prior to utilization of the pond as an equalization basin. The certification shall be sent to the TCEQ Regional Office (MC Region 4), the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, and the Water Quality Assessment Team (MC 150) of the Water Quality Division. A copy of the pond liner certification shall be available at the plant site for inspection by authorized representatives of the TCEQ.

- B. Prior to utilization of the southeastern pond with necessary modifications for the equalization basin, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary submittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications and a final engineering design report which comply with 30

TAC Chapter 217, Design Criteria for Wastewater Treatment Systems. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

10. The permittee submitted a closure plan dated August 18, 2011. The permittee shall submit quarterly progress reports on the progress of the removal of accumulated solids in the existing ponds and pond closure in accordance with the actions described in the plan submitted August 18, 2011 titled Closure Plan Summary Letter, City of Krum. The requirement to submit quarterly progress reports shall expire upon the submission of a final progress report submitted after all accumulated solids have been removed from the existing ponds and the ponds have undergone final closure.

**PROGRESS REPORT DATES**

January 1  
April 1  
July 1  
October 1

The quarterly progress reports shall include a discussion of the progress toward attaining removal of accumulated solids from all ponds and final pond closures. Reports at minimum must contain a discussion of actions undertaken the previous quarter and updated estimates for completing solids removal and pond closure.

All reports shall be submitted to the TCEQ Regional Office (MC Region 4).



**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

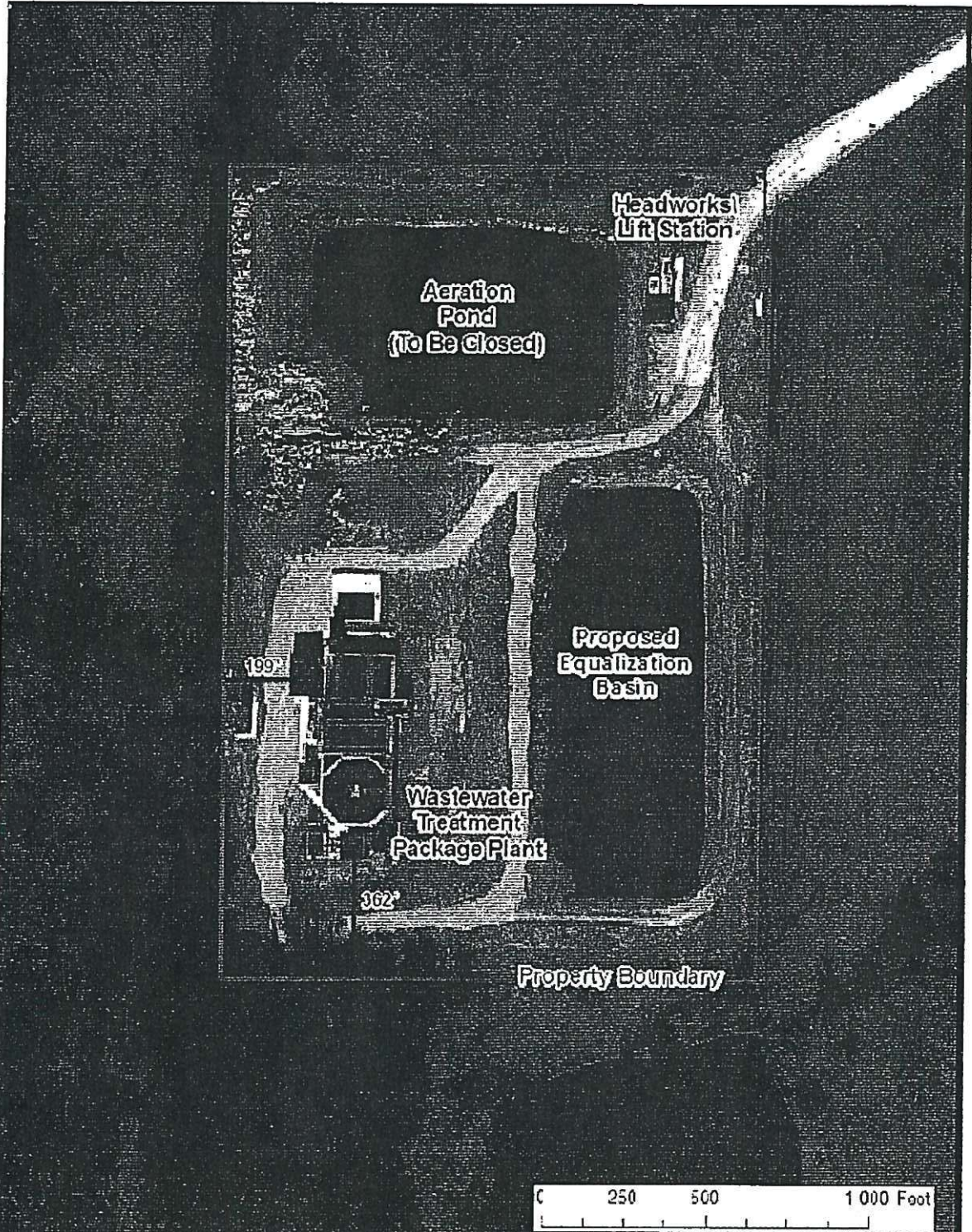
1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen demanding pollutants (e.g., biological oxygen demand or BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007



City of Krum  
 WQ0010729001  
 Attachment A



**FN FREESE NICHOLS**  
 PROFESSIONAL ENGINEERS  
 2310 WASHINGTON ST. SUITE 200  
 FORT WORTH, TX 76102-4862  
 PHONE: (817) 731-7291



CITY OF KRUM  
**TPDES Permit Application**

**Buffer Zone Map**

DATE	02-18-10
PLANNED	02-18-10
DATE	02-18-10
SCALE	AS SHOWN
DESIGNED	SS
CHECKED	SS
DATE	02-18-10



# **Exhibit C**



TPDES PERMIT NO.  
WQ0015536001  
[For TCEQ office use only - EPA I.D.  
No. TX0137464]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

Mustang Special Utility District

whose mailing address is

7985 Farm-to-Market Road 2931  
Aubrey, Texas 76227

is authorized to treat and discharge wastes from the Sandbrock Wastewater Treatment Facility,  
SIC Code 4952

located on the west side of Farm-to-Market Road 1385, approximately 0.2 miles south of the  
intersection of Farm-to-Market 1385 and Farm-to-Market Road 428 in Denton County, Texas  
76227

to Little Elm Creek; thence to Lake Lewisville in Segment No. 0823 of the Trinity River Basin

only according to effluent limitations, monitoring requirements, and other conditions set forth  
in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ),  
the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does  
not grant to the permittee the right to use private or public property for conveyance of  
wastewater along the discharge route described in this permit. This includes, but is not limited  
to, property belonging to any individual, partnership, corporation, or other entity. Neither does  
this permit authorize any invasion of personal rights nor any violation of federal, state, or local  
laws or regulations. It is the responsibility of the permittee to acquire property rights as may be  
necessary to use the discharge route.

This permit shall expire at midnight, **October 1, 2021.**

ISSUED DATE: July 7, 2017

  
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For the Commission

INTERIM I EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 5.0 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.2 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 451 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Max. Single Grab Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (17)	15	25	35	One/week	Grab
Total Suspended Solids	15 (25)	25	40	60	One/week	Grab
Ammonia Nitrogen	3 (5.0)	6	10	15	One/week	Grab
Total Phosphorus	1.0 (1.7)	2	4	6	One/week	Grab
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	N/A	399	One/month	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l and shall not exceed a chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored five times per week by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 5.0 mg/l and shall be monitored once per week by grab sample.

INTERIM II EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the completion of expansion to the 5.0 million gallons per day (MGD) facility and lasting through the completion of expansion to the 15.0 MGD facility, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 5.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 11,285 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (209)	10	20	30	Five/week	Composite
Total Suspended Solids	5 (209)	10	20	30	Five/week	Composite
Ammonia Nitrogen	2 (83)	5	10	15	Five/week	Composite
Total Phosphorus	1.0 (42)	2	4	6	Five/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	One/week	Grab

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored five times per week by grab sample.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

- During the period beginning upon the completion of expansion to the 15.0 million gallons per day (MGD) facility and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:  
The daily average flow of effluent shall not exceed 15.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 33,854 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Min. Self-Monitoring Requirements</u>	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (626)	10	20	30	Five/week	Composite
Total Suspended Solids	5 (626)	10	20	30	Five/week	Composite
Ammonia Nitrogen	1.5 (188)	5	10	15	Five/week	Composite
Total Phosphorus	1.0 (125)	2	4	6	Five/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Five/week	Grab

- The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample at each chlorine contact chamber. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
- The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.
- There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
- Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
- The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored five times per week by grab sample.



**DEFINITIONS AND STANDARD PERMIT CONDITIONS**

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

**1. Flow Measurements**

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

**2. Concentration Measurements**

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).



- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## **MONITORING AND REPORTING REQUIREMENTS**

### **1. Self-Reporting**

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### **2. Test Procedures**

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

### **3. Records of Results**

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period



of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.

c. Records of monitoring activities shall include the following:

- i. date, time and place of sample or measurement;
- ii. identity of individual who collected the sample or made the measurement.
- iii. date and time of analysis;
- iv. identity of the individual and laboratory who performed the analysis;
- v. the technique or method of analysis; and
- vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective September 1, 2020, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
  - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
    - i. Unauthorized discharges as defined in Permit Condition 2(g).
    - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
    - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that

discharge will exceed the highest of the following "notification levels":

- i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

#### 11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

### PERMIT CONDITIONS

#### 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the

Executive Director, it shall promptly submit such facts or information.

- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWCS§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of





(relating to New Sources and New Dischargers); or

- ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
  - c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
  - d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
  - e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
  - f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
5. Permit Transfer
- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications

Review and Processing Team (MC 148) of the Water Quality Division.

- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
  - iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee and the permit number(s);
  - ii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iii. the date of filing of the petition.



**OPERATIONAL REQUIREMENTS**

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).
7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not



confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 169) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
  - c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and

related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Environmental Cleanup Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335-5.
  - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
  - f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
    - i. Volume of waste and date(s) generated from treatment process;
    - ii. Volume of waste disposed of on-site or shipped off-site;

- iii. Date(s) of disposal;
- iv. Identity of hauler or transporter;
- v. Location of disposal site; and
- vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

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## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Sewage Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

#### B. Testing Requirements

1. Sewage sludge shall be tested once during the term of this permit in the Interim phase and annually in the Interim II and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B pathogen requirements.

- a. For sewage sludge to be classified as Class A with respect to pathogens, the density of fecal coliform in the sewage sludge be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB with respect to pathogens, the density of fecal coliform in the sewage sludge be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB sewage sludge may be classified a Class A sewage sludge if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B criteria for



sewage sludge.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a

single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.



- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.

#### 4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been

treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Sewage sludge shall be injected below the surface of the land.
  - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When sewage sludge that is incorporated into the soil is Class A or Class AB with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test	- once during the term of this permit in the Interim phase and annually in the Interim II and Final phases
PCBs	- once during the term of this permit in the Interim phase and annually in the Interim II and Final phases

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\* *The amount of bulk sewage sludge applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (e.g., sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\*Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

**D. Notification Requirements**

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk sewage sludge will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

**E. Record keeping Requirements**

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at

the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B sludge, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.

5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
  - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.
  - b. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.
  - c. The number of acres in each site on which bulk sludge is applied.
  - d. The date and time sludge is applied to each site.



- e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
- f. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### **F. Reporting Requirements**

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year the following information. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (e.g., sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.

14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.
16. Amount of sludge transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk sewage sludge is applied.
  - c. The date and time bulk sewage sludge is applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
  - e. The amount of sewage sludge (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.



**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE  
DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.
- D. Sewage sludge shall be tested once during the term of this permit in the Interim phase and annually in the Interim II and Final phases in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30<sup>th</sup> of each year the following information. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (e.g., sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge production in dry tons/year.
4. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge transported interstate in dry tons/year.
6. A certification that the sewage sludge meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION IV. REQUIREMENTS APPLYING TO SLUDGE TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING**

These provisions apply to sludge that is transported to another wastewater treatment facility or facility that further processes sludge. These provisions are intended to allow transport of sludge to facilities that have been authorized to accept sludge. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge, nor do they limit the ability of the receiving facility to request additional testing or documentation.

**A. General Requirements**

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge may only be transported using a registered transporter or using an approved pipeline.

**B. Record Keeping Requirements**

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
  - a. the amount of sludge transported;
  - b. the date of transport;
  - c. the name and TCEQ permit number of the receiving facility or facilities;
  - d. the location of the receiving facility or facilities;
  - e. the name and TCEQ permit number of the facility that generated the waste; and
  - f. copy of the written agreement between the permittee and the receiving facility to accept sludge.
2. For sludge transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

### C. Reporting Requirements

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30<sup>th</sup> of each year. Effective September 1, 2020, the permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge treatment process or processes at the facility: preliminary operations (e.g., sludge grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge production;
3. the amount of sludge transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

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**OTHER REQUIREMENTS**

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category C in the Interim I phase, Category B in the Interim II phase, and Category A in the Final phase must be operated by a chief operator or an operator holding a Category C license or higher in the Interim I phase, Category B license or higher in the Interim II phase, and Category A license or higher in the Final phase. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as 300 feet downstream and 100 feet upstream from the point of discharge.
4. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit, 1/month may be reduced to 1/quarter in the Interim I phase, 1/week may be reduced to 2/month in the Interim II phase, and 5/week may be reduced to 3/week in the Final phase. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.
7. Prior to construction of the treatment facility, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans and specifications and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the permitted effluent limitations required on Pages 2, 2a, and 2b of this

permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

8. Reporting requirements according to 30 TAC §§ 319.1-319.11 and any additional effluent reporting requirements contained in this permit are suspended from the effective date of the permit until plant startup or discharge from the facility described by this permit, whichever occurs first. The permittee shall provide written notice to the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division at least forty-five (45) days prior to plant startup or anticipated discharge, whichever occurs first, and prior to completion of each additional phase on Notification of Completion Form 20007.
9. Within 120 days from the start-up of the Interim II phase, the permittee shall complete Attachment A with the analytical results for Outfall 001. The completed tables with the results of these analysis and laboratory reports shall be submitted to the Municipal Permits Team, Wastewater Permitting Section MC 148, TCEQ Water Quality Division. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations and/or monitoring requirements. Test methods utilized to complete the tables shall be according to the test procedures specified in the Definitions and Standard Permit Conditions section of this permit and sensitive enough to detect the parameters listed in Attachment A at the minimum analytical level (MAL).



**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen-demanding pollutants (e.g., biological oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised July 2007

**BIOMONITORING REQUIREMENTS****CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER**

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

**1. Scope, Frequency, and Methodology**

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. Within 90 days of initial discharge of the 5 MGD facility, the permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
  - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction
  - 1) If none of the first four consecutive quarterly tests demonstrates



significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

## 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
  - 1) a control mean survival of 80% or greater;
  - 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
  - 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
  - 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
  - 5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;
  - 6) a percent minimum significant difference of 47 or less for water flea reproduction; and
  - 7) a percent minimum significant difference of 30 or less for fathead minnow growth.
- b. Statistical Interpretation
  - 1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be the Fisher's exact test as described in the manual referenced in in Part 1.b.
  - 2) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent

dilution shall be in accordance with the manual referenced in Part 1.b..

- 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 4) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
- 5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control (0% effluent).
- 6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3.
- 7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 3 will be used when making a determination of test acceptability.
- 8) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

- 1) Dilution water used in the toxicity tests must be the receiving water collected at a point upstream of the discharge point as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:

- a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or
  - b) use the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
- a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
  - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days); and
  - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.
- d. Samples and Composites
- 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
  - 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the

effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

- 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
  - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
  - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
  - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the water flea, Parameter TOP3B, report the NOEC for survival.
  - 3) For the water flea, Parameter TXP3B, report the LOEC for survival.
  - 4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."
  - 5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.
  - 6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.
  - 7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for



survival is less than the critical dilution; otherwise, enter a "o."

- 8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.
  - 9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.
  - 10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "o."
  - 11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.
  - 12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "o."
  - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "o."

#### 4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. Significant lethality and significant effect were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.

- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
  - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a

- specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
- 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation which identifies the pollutant(s) and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.
- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.



TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

\*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)  
 Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) LOEC survival = \_\_\_\_\_ % effluent

c.) NOEC reproduction = \_\_\_\_\_ % effluent

d.) LOEC reproduction = \_\_\_\_\_ % effluent

**TABLE 1 (SHEET 3 OF 4)**  
**BIOMONITORING REPORTING**  
**FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL**

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date Time \_\_\_\_\_ TO: \_\_\_\_\_ Date Time \_\_\_\_\_

No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic dilution water

**FATHEAD MINNOW GROWTH DATA**

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

\* Coefficient of Variation = standard deviation x 100/mean

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

TABLE 1 (SHEET 4 OF 4)  
 BIOMONITORING REPORTING  
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST  
 FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

\* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) LOEC survival = \_\_\_\_\_ % effluent

c.) NOEC growth = \_\_\_\_\_ % effluent

d.) LOEC growth = \_\_\_\_\_ % effluent



24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. Within 90 days of initial discharge of the 5 MGD facility, the toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:
  - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
  - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, and then repeat, an invalid test during the same reporting period. The repeat test shall include the control and the 100% effluent dilution and use the appropriate number of organisms and replicates, as specified above. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted

to comply with the minimum testing frequency defined in item b.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
  - 1) The permittee shall collect one composite sample from Outfall 001.
  - 2) The permittee shall collect the composite sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The sample shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
  - 5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
  - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.



- 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, and October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the water flea, Parameter TIE3D, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
  - 2) For the fathead minnow, Parameter TIE6C, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
- d. Enter the following codes for retests only:
  - 1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
  - 2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."

#### 4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee

shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:

- 1) **Specific Activities** - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) **Sampling Plan** - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
  - 3) **Quality Assurance Plan** - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
  - 4) **Project Organization** - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the



progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in Part 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism. A copy of the TRE final report shall also be submitted to the U.S. EPA Region 6 office.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.
- The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.
- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_ % effluent

TABLE 2 (SHEET 2 OF 2)  
 FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_ % effluent



**DOMESTIC WORKSHEET 4.0**

**POLLUTANT ANALYSES REQUIREMENTS\***

The following is required for facilities with a permitted or proposed flow of 1.0 MGD or greater, or facilities with an approved pretreatment program. See instructions for further details.

**Worksheet not required for minor amendments without renewal**

**Section 1. Toxic Pollutants**

For pollutants identified in Table 4.0(1), indicate type of sample.

Grab  Composite

Date and time sample(s) collected:

Table 4.0(1) – Toxics Analysis

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrylonitrile				50
Aldrin				0.01
Aluminum				2.5
Anthracene				10
Antimony				5
Arsenic				0.5
Barium				3
Benzene				10
Benzidine				50
Benzo(a)anthracene				5
Benzo(a)pyrene				5
Bis(2-chloroethyl)ether				10
Bis(2-ethylhexyl)phthalate				10
Bromodichloromethane				10
Bromoform				10

Attachment A  
WQ0015536001  
Mustang Special Utility District

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Cadmium				1
Carbon Tetrachloride				2
Carbaryl				5
Chlordane*				0.2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroform				10
Chlorpyrifos				0.05
Chromium (Total)				3
Chromium (Tri) (*1)				N/A
Chromium (Hex)				3
Copper				2
Chrysene				5
p-Chloro-m-Cresol				10
4,6-Dinitro-o-Cresol				50
p-Cresol				10
Cyanide (*2)				10
4,4'- DDD				0.1
4,4'- DDE				0.1
4,4'- DDT				0.02
2,4-D				0.7
Demeton (O and S)				0.20
Diazinon				0.5/0.1
1,2-Dibromoethane				10
m-Dichlorobenzene				10

Attachment A  
WQ0015536001  
Mustang Special Utility District

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
o-Dichlorobenzene				10
p-Dichlorobenzene				10
3,3'-Dichlorobenzidine				5
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
Dichloromethane				20
1,2-Dichloropropane				10
1,3-Dichloropropene				10
Dicofol				1
Dieldrin				0.02
2,4-Dimethylphenol				10
Di-n-Butyl Phthalate				10
Diuron				0.09
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Ethylbenzene				10
Fluoride				500
Guthion				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclohexane (alpha)				0.05

Attachment A  
WQ0015536001  
Mustang Special Utility District

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Hexachlorocyclohexane (beta)				0.05
gamma-Hexachlorocyclohexane (Lindane)				0.05
Hexachlorocyclopentadiene				10
Hexachloroethane				20
Hexachlorophene				10
Lead				0.5
Malathion				0.1
Mercury				0.005
Methoxychlor				2
Methyl Ethyl Ketone				50
Mirex				0.02
Nickel				2
Nitrate-Nitrogen				100
Nitrobenzene				10
N-Nitrosodiethylamine				20
N-Nitroso-di-n-Butylamine				20
Nonylphenol				333
Parathion (ethyl)				0.1
Pentachlorobenzene				20
Pentachlorophenol				5
Phenanthrene				10
Polychlorinated Biphenyls (PCB's) (*3)				0.2
Pyridine				20
Selenium				5



Attachment A  
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Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Silver				0.5
1,2,4,5-Tetrachlorobenzene				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10
Thallium				0.5
Toluene				10
Toxaphene				0.3
2,4,5-TP (Silvex)				0.3
Tributyltin (see instructions for explanation)				0.01
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
2,4,5-Trichlorophenol				50
TTHM (Total Trihalomethanes)				10
Vinyl Chloride				10
Zinc				5

(\*1) Determined by subtracting hexavalent Cr from total Cr.

(\*2) Cyanide, amenable to chlorination or weak-acid dissociable.

(\*3) The sum of seven PCB congeners 1242, 1254, 1221, 1232, 1248, 1260, and 1016.

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**Section 2. Priority Pollutants**

For pollutants identified in Tables 4.0(2)A-E, indicate type of sample.

Grab  Composite

Date and time sample(s) collected:

**Table 4.0(2)A – Metals, Cyanide, Phenols**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Antimony				5
Arsenic				0.5
Beryllium				0.5
Cadmium				1
Chromium (Total)				3
Chromium (Hex)				3
Chromium (Tri) (*1)				N/A
Copper				2
Lead				0.5
Mercury				0.005
Nickel				2
Selenium				5
Silver				0.5
Thallium				0.5
Zinc				5
Cyanide (*2)				10
Phenols, Total				10

(\*1) Determined by subtracting hexavalent Cr from total Cr.

(\*2) Cyanide, amenable to chlorination or weak-acid dissociable

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**Table 4.0(2)B – Volatile Compounds**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acrolein				50
Acrylonitrile				50
Benzene				10
Bromoform				10
Carbon Tetrachloride				2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroethane				50
2-Chloroethylvinyl Ether				10
Chloroform				10
Dichlorobromomethane				10
1,1-Dichloroethane				10
1,2-Dichloroethane				10
1,1-Dichloroethylene				10
1,2-Dichloropropane				10
1,3-Dichloropropylene [1,3-Dichloropropene]				10
1,2-Trans-Dichloroethylene				10
Ethylbenzene				10
Methyl Bromide				50
Methyl Chloride				50
Methylene Chloride				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene				10
Toluene				10
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene				10
Vinyl Chloride				10

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**Table 4.0(2)C – Acid Compounds**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
2-Chlorophenol				10
2,4-Dichlorophenol				10
2,4-Dimethylphenol				10
4,6-Dinitro-o-Cresol				50
2,4-Dinitrophenol				50
2-Nitrophenol				20
4-Nitrophenol				50
P-Chloro-m-Cresol				10
Pentalchlorophenol				5
Phenol				10
2,4,6-Trichlorophenol				10

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**Table 4.0(2)D – Base/Neutral Compounds**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Acenaphthene				10
Acenaphthylene				10
Anthracene				10
Benzidine				50
Benzo(a)Anthracene				5
Benzo(a)Pyrene				5
3,4-Benzofluoranthene				10
Benzo(ghi)Perylene				20
Benzo(k)Fluoranthene				5
Bis(2-Chloroethoxy)Methane				10
Bis(2-Chloroethyl)Ether				10
Bis(2-Chloroisopropyl)Ether				10
Bis(2-Ethylhexyl)Phthalate				10
4-Bromophenyl Phenyl Ether				10
Butyl benzyl Phthalate				10
2-Chloronaphthalene				10
4-Chlorophenyl phenyl ether				10
Chrysene				5
Dibenzo(a,h)Anthracene				5
1,2-(o)Dichlorobenzene				10
1,3-(m)Dichlorobenzene				10
1,4-(p)Dichlorobenzene				10
3,3-Dichlorobenzidine				5
Diethyl Phthalate				10
Dimethyl Phthalate				10
Di-n-Butyl Phthalate				10
2,4-Dinitrotoluene				10
2,6-Dinitrotoluene				10
Di-n-Octyl Phthalate				10
1,2-Diphenylhydrazine (as Azo-benzene)				20
Fluoranthene				10
Fluorene				10
Hexachlorobenzene				5



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Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Hexachlorobutadiene				10
Hexachlorocyclo-pentadiene				10
Hexachloroethane				20
Indeno(1,2,3-cd)pyrene				5
Isophorone				10
Naphthalene				10
Nitrobenzene				10
N-Nitrosodimethylamine				50
N-Nitrosodi-n-Propylamine				20
N-Nitrosodiphenylamine				20
Phenanthrene				10
Pyrene				10
1,2,4-Trichlorobenzene				10

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**Table 4.0(2)E - Pesticides**

Pollutant	AVG Effluent Conc. (µg/l)	MAX Effluent Conc. (µg/l)	Number of Samples	MAL (µg/l)
Aldrin				0.01
alpha-BHC (Hexachlorocyclohexane)				0.05
beta-BHC (Hexachlorocyclohexane)				0.05
gamma-BHC (Hexachlorocyclohexane)				0.05
delta-BHC (Hexachlorocyclohexane)				0.05
Chlordane				0.2
4,4-DDT				0.02
4,4-DDE				0.1
4,4,-DDD				0.1
Dieldrin				0.02
Endosulfan I (alpha)				0.01
Endosulfan II (beta)				0.02
Endosulfan Sulfate				0.1
Endrin				0.02
Endrin Aldehyde				0.1
Heptachlor				0.01
Heptachlor Epoxide				0.01
PCB-1242				0.2
PCB-1254				0.2
PCB-1221				0.2
PCB-1232				0.2
PCB-1248				0.2
PCB-1260				0.2
PCB-1016				0.2
Toxaphene				0.3

**Section 3. Dioxin/Furan Compounds**

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A. Are any of the following compounds used by a contributing industrial user or significant industrial user that is part of the collection system for the facility that you have reason to believe are present in the influent to the WWTP?

Yes  No

If yes, identify which compound(s) are potentially sent to the facility.

- 2,4,5-trichlorophenoxy acetic acid  
Common Name 2,4,5-T, CASRN 93-76-5
- 2-(2,4,5-trichlorophenoxy) propanoic acid  
Common Name Silvex or 2,4,5-TP, CASRN 93-72-1
- 2-(2,4,5-trichlorophenoxy) ethyl 2,2-dichloropropionate  
Common Name Erbon, CASRN 136-25-4
- 0,0-dimethyl 0-(2,4,5-trichlorophenyl) phosphorothioate  
Common Name Ronnel, CASRN 299-84-3
- 2,4,5-trichlorophenol  
Common Name TCP, CASRN 95-95-4
- hexachlorophene  
Common Name HCP, CASRN 70-30-4

For each compound identified, provide a brief description of the conditions of its/their presence at the facility.

B. Do you know or have any reason to believe that 2,3,7,8 Tetrachlorodibenzo-P-Dioxin (TCDD) or any congeners of TCDD may be present in your effluent?

Yes  No

If yes, provide a brief description of the conditions for its presence.

If you responded **yes** to either Subsection A or B, complete Table 4.0(2)F.

For pollutants identified in Table 4.0(2)F, indicate type of sample.

Grab  Composite

Date and time sample(s) collected:



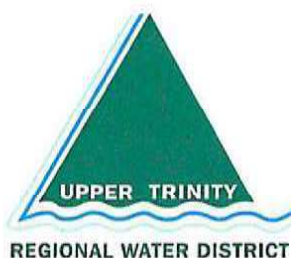
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**TABLE 4.0(2)F - DIOXIN/FURAN COMPOUNDS**

Compound	Toxic Equivalency Factors	Wastewater Concentration (ppq)	Wastewater Equivalents (ppq)	Sludge Concentration (ppt)	Sludge Equivalents (ppt)	MAL (ppq)
2,3,7,8 TCDD	1					10
1,2,3,7,8 PeCDD	0.5					50
2,3,7,8 HxCDDs	0.1					50
1,2,3,4,6,7,8 HpCDD	0.01					50
2,3,7,8 TCDF	0.1					10
1,2,3,7,8 PeCDF	0.05					50
2,3,4,7,8 PeCDF	0.5					50
2,3,7,8 HxCDFs	0.1					50
2,3,4,7,8 HpCDFs	0.01					50
OCDD	0.0003					100
OCDF	0.0003					100
PCB 77	0.0001					0.5
PCB 81	0.0003					0.5
PCB 126	0.1					0.5
PCB 169	0.03					0.5
Total						

# **Exhibit D**

# RESOLUTION



## RESOLUTION # 2017- 17

### **A RESOLUTION OF THE BOARD OF DIRECTORS OF UPPER TRINITY REGIONAL WATER DISTRICT AUTHORIZING THE FILING AND PROSECUTION OF AN APPLICATION TO AMEND WATER USE PERMIT 5778 WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.**

**WHEREAS**, the District holds Water Use Permit No. 5778 (the "Permit"), which includes, among other things, the authorization to reuse the lesser of (1) not to exceed 9,664 acre-feet of Chapman Lake-derived return flows per year, or (2) an amount of Chapman Lake-derived return flows actually discharged less conveyance losses; and

**WHEREAS**, return flows derived from Chapman Lake discharged from wastewater treatment plants of the District and its Members and Customers pass through Lewisville Lake before diversion and use by the District; and

**WHEREAS**, the wastewater treatment plants (the "WWTPs") that are identified in the Permit discharge return flows into or upstream of Lewisville Lake; and

**WHEREAS**, the Permit specifies the discharge points and rates of the associated return flows; and

**WHEREAS**, a Member or Customer of the District that receives water that originated in Chapman Lake has recently received a permit for a new WWTP that will discharge its return flows into or upstream of Lewisville Lake; and

**WHEREAS**, the Board of Directors of the District deems it to be appropriate and in the best interest of the District to add this additional discharge point to those points now specified in the Permit; and

**WHEREAS**, Chapter 11 of the Texas Water Code (the "TWC") requires authorization from the Texas Commission on Environmental Quality (the "Commission") to add such points of discharge to the Permit; and

**WHEREAS**, to comply with the requirements of the TWC, the District must file and prosecute an application to amend the Permit (the "Application") with the Commission, which Application must include proof of authorization to execute said Application on behalf of the District; and

**WHEREAS**, the District now desires to file an Application, and authorize its Executive Director, on behalf of the District, to prepare and execute such Application to amend the Permit to add additional discharge points; and

**WHEREAS**, the Executive Director recommends that said application be filed with the Commission with due diligence.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE UPPER TRINITY REGIONAL WATER DISTRICT:**

**SECTION 1.** That the Board of Directors does hereby authorize the filing and prosecution of an application with the Commission to amend Water Use Permit 5778.

**SECTION 2.** That the Executive Director is hereby directed to file said Application on behalf of the District, to appear and arrange for the appearance of persons representing the District at any proceedings on said Application before the Commission, and to direct the prosecution, compromise and settlement on behalf of the District.

**SECTION 3.** That this Resolution shall become effective immediately upon its passage.

**DULY PASSED AND APPROVED THIS 3<sup>RD</sup> DAY OF AUGUST 2017.**

Recommended: Thomas E. Taylor  
Thomas E. Taylor, Executive Director

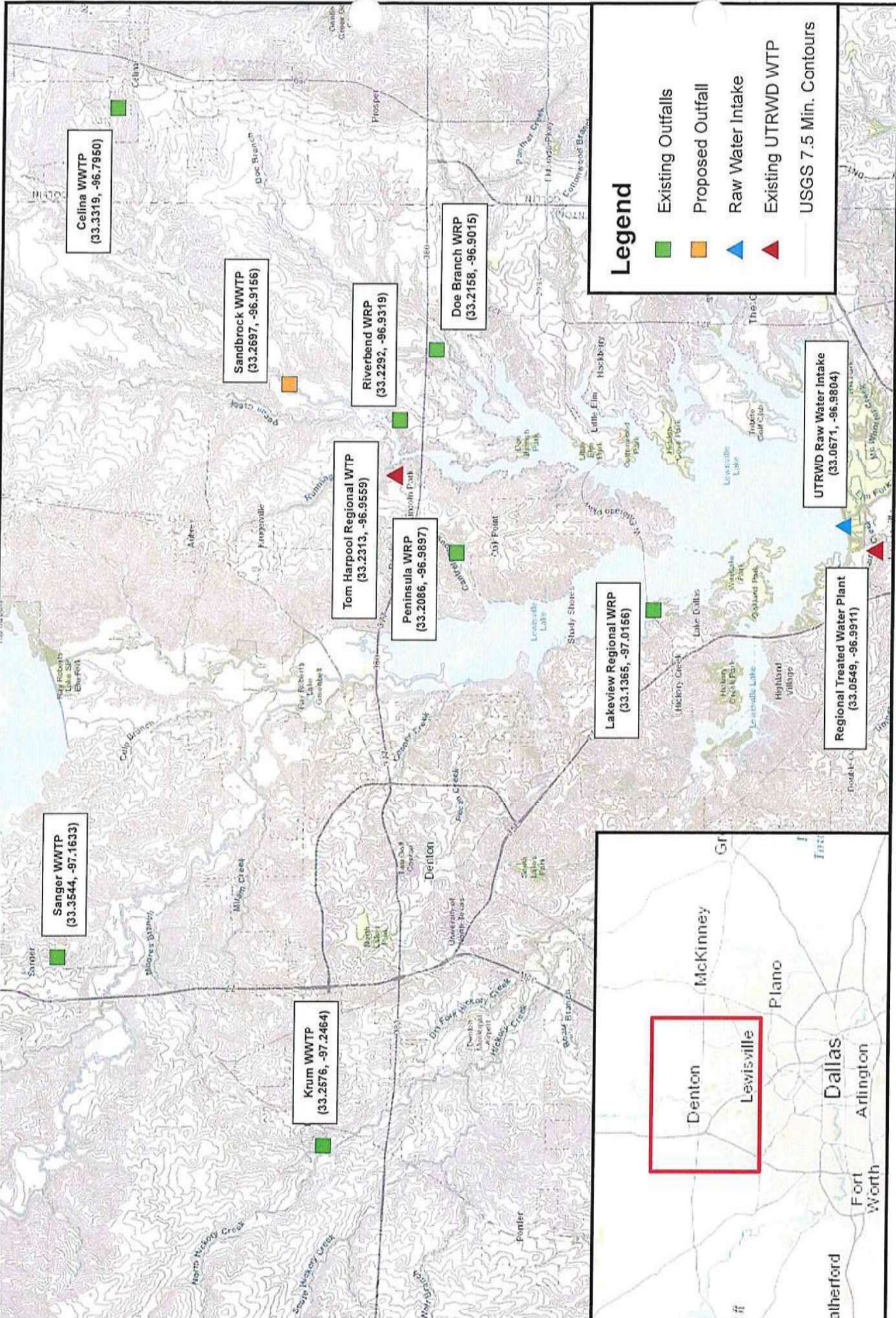
Executed: Kevin Mercer  
Kevin Mercer, President

Attest: Mike Fairfield  
Mike Fairfield, Secretary



# **Exhibit E**





**General Location Map - Amendment to CA 5778**

Document Path: F:\projects\0468\038-0212-0 Wrk Prod\2-9 GIS\Permit\_Map.mxd

# **Exhibit F**



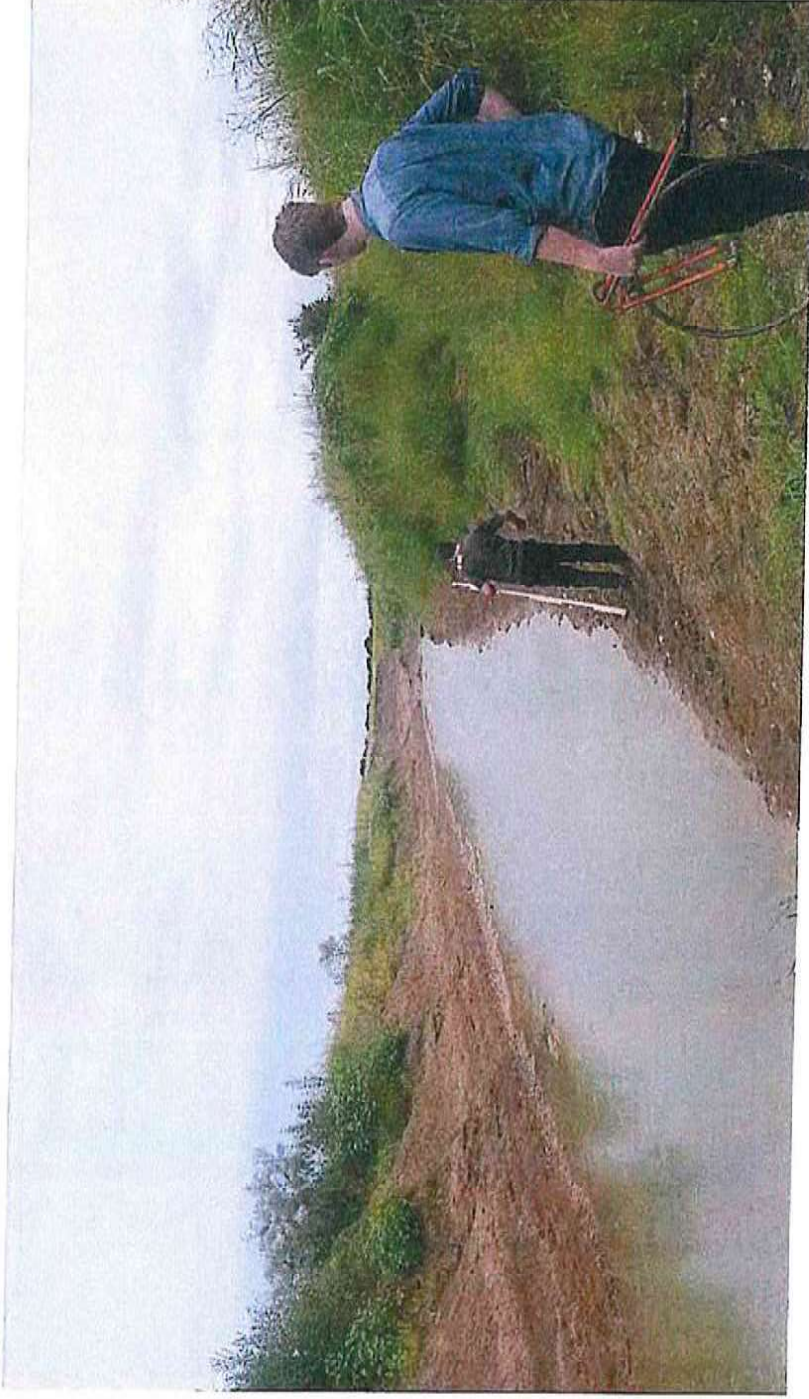


**View of receiving stream from outfall location facing downstream (southwest)**

35

35





**View of receiving stream from outfall location facing upstream (north)**

# **Exhibit G**



Permit 5778 m



**UPPER TRINITY REGIONAL WATER DISTRICT  
REUSE OF CHAPMAN LAKE WATER  
ACCOUNTING PLAN DETAILED DOCUMENTATION**

Last Revised: August 30, 2017

**Introduction**

The purpose of this document is to provide a detailed explanation of each calculation contained in the Chapman Water Accounting Plan. This plan is to be used as described in the document “Agreement between City of Dallas and Upper Trinity Regional Water District Regarding Use of Lewisville Lake for Pass Through of Chapman Lake Water”, hereafter referred to as the “reuse agreement”.

The primary objective of the accounting plan is to track the District’s portion of Chapman Lake water, beginning at its point of delivery to the Trinity River Basin, through the District’s water treatment facilities, customers, wastewater treatment facilities and subsequently to Lewisville Lake where it is then available for reuse. The tables within the accounting plan are organized such that all input is entered into Tables I-1 through I-3. Calculations are then performed within Tables C-1 through C-6. A summary of measured and calculated values to be provided to Dallas and Denton each month is provided in Table S-1 and an annual summary is provided in Table S-2. Each accounting table is described in detail in the following sections.

**Input Tables**

These tables include fields for entering all measured or reported data required for model calculations. In each table all blue shaded cells require input of a number from an outside source.

**Table I-1**

This spreadsheet contains all input data requiring monthly updates within the accounting model. All numbers that are input are contained in the blue shaded cells of the spreadsheet. Each input field is defined below:

FIELD	DESCRIPTION
<b>WTP/CONVEYANCE/CHANNEL LOSS DATA</b>	
<i>Month/year</i>	Calendar month and year represented by data.
<i>Lewisville Lake Water Surface Elevation, ft:</i>	Water surface elevation of Lewisville Lake at beginning of month, obtained from USACOE.
<i>Assumed WTP and Raw Water</i>	Losses between RWTP intake and RWTP

FIELD	DESCRIPTION
<i>Conveyance Losses, Regional WTP (L_RWTP):</i>	discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP):</i>	Losses between HWTP intake and HWTP discharge (expressed as a percentage of intake flow). Based on audit of actual metered data, as described in section 3.4(d) of reuse agreement.
<i>Assumed Doe Branch Losses, %/mile</i>	Channel loss rate within Doe Branch. Value is determined based on sections 3.4(b) and 3.4(c) of the reuse agreement.
<i>Assumed Channel Conveyance Losses, %/mile</i>	Channel conveyance loss rate between the point of discharge of a WWTP and the water surface of Lewisville Lake. Value is determined based on section 4.2(c) 5. of the reuse agreement.
<i>Assumed Consumption Losses Between WTP and Customers (L_CONS_a):</i>	Losses between WTP discharge and Chapman Lake water customer meters (expressed as a percentage of WTP discharge flow). Based on audit of metered WTP and customer data.
<i>Doe Branch Channel Length, miles</i>	Length of Doe Branch between point of Chapman water discharge and Lewisville Lake. Updated as Lewisville Lake water surface elevation changes, using automatic lookup to Doe Branch Stream Distance Table (attached). Data in this table will be augmented by surveying or other appropriate data collection methods when water level falls below 515 ft.
<i>Doe Branch Losses (L_Doe)</i>	Computed Doe Branch losses, expressed as percentage of Chapman water entering Doe Branch. Computed as <i>Assumed Doe Branch Losses, %/mile</i> x <i>Doe Branch Channel Length, miles</i> .
<b>RETURN FLOW FACTORS</b>	
<i>Lakeview Regional WWTP, Riverbend Regional WWTP, etc.</i>	Return flow factor, as defined in definition (y) of reuse agreement. This factor will be based on an audit of actual metered data, as described in section 4.2(c) of the reuse agreement. Each WWTP will have a separate return flow factor. Only those WWTPs returning Chapman Lake water to Lake Lewisville for subsequent reuse will be assigned a non-zero return flow factor. All other WWTPs will be assigned a return flow factor of zero.

**Table I-2**

This spreadsheet contains all daily input associated with raw and treated water quantities. All numbers in blue shaded cells will be input into the model. Each column is described in detail below.

<b>FIELD</b>	<b>DESCRIPTION</b>
<i>Total Amount of Water from Chapman Lake</i>	Total amount of Chapman Lake Water delivered from Chapman Lake by pipeline to the Trinity River basin. Includes water for customers other than the District (e.g. Irving). Will be obtained from a meter located at the pipeline discharge (section 5.3 (a) of reuse agreement).
<i>CLW (District's portion)</i>	District's portion of Chapman Lake Water at the pipeline discharge point. To be provided to District by City of Irving.
<i>CLW Diverted Directly to Harpool WTP</i>	Amount of Chapman Lake water diverted directly to the Harpool WTP. Metered value.
<i>District's CLW Discharged into Doe Branch</i>	District's portion of Chapman Lake water discharged directly into Doe Branch. Calculated by subtracting the Chapman Lake water diverted to Harpool WTP from the total District portion of Chapman Lake water at the pipeline discharge point (section 5.3 (b) of reuse agreement).
<i>Total Raw Water to RWTP</i>	Total amount of raw water diverted from Lewisville Lake to RWTP. Metered value.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers
<i>Amount of Water Purchased by District from Dallas</i>	Amount of water purchased by the District from Dallas (section 5.3 (j) 1. of reuse agreement)
<i>Amount of Water Purchased by District from Denton</i>	Amount of water purchased by the District from Denton (section 5.3 (j) 2. of reuse agreement)
<i>Delivered District Water to Customers (multiple columns)</i>	Total amount of treated water delivered to each District water customer.

**Table I-3**

This spreadsheet contains all daily input of measured discharges and any direct or indirect reuse losses from all District or customer wastewater treatment plants (WWTPs) participating in the Chapman Reuse program. Average daily discharge, from each WWTP, obtained from metered values, will be entered in the appropriate cells on this table. Discharge data is only required for those WWTPs that contribute return flows subsequently used by the District as part of the program.



## Calculation Tables

The calculation tables contain all computations within the accounting plan. As described below, Table C-1 includes calculations to determine the percentage of Chapman Lake water to be allocated to each customer. Table C-2 contains all Chapman Lake water calculations associated with each individual customer of a regional WWTP. Table C-3 provides a sum of values for all customers of a regional WWTP. Tables C-4 and C-5 are identical to Tables C-2 and C-3, except that they are representative of individual customers, each with its own WWTP. Table C-5 provides a sum of values for all individual WWTP customers. Table C-6 sums all values for all contributing WWTPs (both regional and individual) to account for the total amount of Chapman Lake water on a daily basis.

In each of the calculation tables, column numbers are shown above each column. These numbers are referenced in the row under the column headings to help clarify the calculation that is performed in each column. Shaded columns represent columns that are taken directly from the input tables. Each calculation table is described in detail below.

### Table C-1

This table includes calculations to determine the percentage of Chapman Lake water contained in the total amount of treated water delivered to each Chapman Lake water customer. Each column is described in detail below.

FIELD	COLUMN #	DESCRIPTION
<i>CLW</i>	C1-1	District's portion of Chapman Lake Water (from Table I-2, Column 2)
<i>CLW Diverted Directly to Harpool WTP</i>	C1-2	Amount of Chapman Lake water diverted directly to the future Harpool WTP (from Table I-2, Column 3)
<i>Assumed WTP and Raw Water Conveyance Losses, Harpool WTP (L_HWTP)</i>	C1-2a	Loss factor for losses between Harpool WTP intake and discharge (from Table I-1)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, Harpool WTP</i>	C1-3	Losses between WTP intake and WTP discharge (Harpool WTP). Computed quantity.
<i>District's CLW Discharged into Doe Branch</i>	C1-4	District's portion of Chapman Lake water discharged directly into Doe Branch. Computed quantity.
<i>Doe Branch Loss Factor (L_Doe)</i>	C1-4a	Loss factor for computing conveyance losses in Doe Branch (from Table I-1)
<i>Doe Branch Conveyance Losses</i>	C1-5	Conveyance losses of District's portion of Chapman Lake water within Doe Branch. Computed quantity.



<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>CLW Discharged Directly into Doe Branch Less Doe Branch Conveyance Losses</i>	C1-6	Total amount of Chapman Lake water available for diversion by the District after subtraction of Doe Branch conveyance losses. Computed quantity.
<i>CLW Withdrawn from LL by Non-UTRWD Entities</i>	C1-6a	Amount of Chapman Lake water diverted from Lewisville Lake by District raw water customers (from Table I-2, Col. 7).
<i>CLW Available for Withdrawal by District (at intake)</i>	C1-6b	Amount of Chapman Lake water available for diversion from Lewisville Lake by District. Computed quantity.
<i>Assumed WTP and Raw Water Conveyance Losses, Regional WTP (L RWTP)</i>	C1-6c	Loss factor for losses between Regional WTP intake and discharge (from Table I-1)
<i>Flow Weighted WTP and Raw Water Conveyance Losses, Both WTPs</i>	C1-6d	Flow-weighted average of the Harpool and Regional loss factors (Columns [2a] and [6c], respectively)
<i>WTP, Pumping &amp; Piping Losses in Raw Water System, RWTP</i>	C1-7	Losses between WTP intake and WTP discharge (RWTP). Computed quantity.
<i>CLW Available for Distribution from RWTP</i>	C1-7a1	Amount of Chapman Lake water available for distribution from Regional WTP. Computed quantity.
<i>CLW Available for Distribution from HWTP</i>	C1-7a2	Treated Chapman Lake water available for distribution from Harpool WTP. (from Table I-2, Col. 5)
<i>Total CLW Available for Distribution from both WTPs (at WTP)</i>	C1-7a	Total amount of Chapman Lake water available for distribution to Chapman Lake water customers from both WTPs (Column [7a1] + Column [7a2]).
<i>Total Raw Water Withdrawn by RWTP</i>	C1-8	Total amount of raw water diverted from Lewisville Lake to RWTP (from Table I-2, Column 5).
<i>Total Treated Water Leaving RWTP (at WTP - i.e., at treated side)</i>	C1-8a1	Total amount of raw water diverted from Lewisville Lake less losses between raw water and treated water meters at RWTP. Computed quantity.
<i>Total Treated Water Leaving both WTPs (at WTP - i.e., at treated side)</i>	C1-8a	Total amount of treated water leaving both WTPs. (Column [8a1] + Column [7a2]).
<i>Total Treated Water Supplied to ALL Water Customers (at customer meters)</i>	C1-8b	Total amount of treated water supplied to all water customers. Sum of daily metered values for all water customer meters, obtained from Table I-2 (includes

FIELD	COLUMN #	DESCRIPTION
		Flower Mound).
<i>Total Treated Water Supplied to CL Water Customers (at customer meters)</i>	C1-9	Total amount of treated water supplied to all Chapman Lake water customers. Sum of daily metered values from all Chapman water customer meters, obtained from Table I-2 (does not include Flower Mound).
<i>Consumption Loss Factor (L_CONS_a)</i>	C1-9a	Loss factor defining losses between WTP discharge and Chapman Lake water customer meters (from Table I-1).
<i>Total Treated Water Supplied to ALL Water Customers (at WTP)</i>	C1-9b	Amount of treated water supplied to all water customers, referenced to WTP discharge. Losses between the WTP discharge and customer meters are added to the value in Column [8b] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers (at WTP)</i>	C1-10	Amount of treated water supplied to Chapman Lake water customers, referenced to the WTP discharge. Losses between the WTP discharge and the customer meters are added to the value in Column [9] to compute this number. Computed quantity.
<i>Total Treated Water Supplied to CL Water Customers less CLRW (at WTP)</i>	C1-10b	Amount of treated water supplied to Chapman Lake water customers after use of Chapman Lake Reuse Water.
<i>Total Treated Water Supplied to Other Water Customers (at WTP)</i>	C1-10c	Amount of treated water supplied to other water customers (i.e. Flower Mound)
<i>Potential CLW Demand from Other Water Customers (at WTP)</i>	C1-10d	Potential Chapman Lake Water demand from other water customers.
<i>CLW Water Supplied to Other Water Customers (at WTP)</i>	C1-10e	Chapman Lake Water supplied to other water customers.
<i>Treated CLW Supplied to CL Water Customers (at WTP)</i>	C1-11	Total amount of treated Chapman Lake Water (does not include reuse water) supplied to Chapman Lake water customers, referenced to the discharge of the WTP.
<i>Unutilized CLW (at WTP)</i>	C1-11a	Amount of Chapman Lake Water not used to supply Chapman Water

FIELD	COLUMN #	DESCRIPTION
		customers (referenced to discharge of WTP).
<i>Unutilized CLRW (at WTP)</i>	C1-11b	Amount of Chapman Lake Reuse Water not used to supply Chapman Water customers (referenced to discharge of WTP).
<i>Ratio CLW Supplied to CL Water Customers to Total Treated Water Supplied to CL Water Customers</i>	C1-12	Percentage of Chapman Lake water supplied to each Chapman Lake water customer. Computed quantity.
<i>Amount of Water Purchased by District from Dallas</i>	C1-13	Amount of water purchased by the District from Dallas (from Table I-2)
<i>Amount of Water Purchased by District from Denton</i>	C1-14	Amount of water purchased by the District from Denton (from Table I-2)
<i>Available Chapman Lake Reuse Water (CLRW) (from Table C-6; previous day)</i>	C1-15	Amount of Chapman Lake water available for reuse on given day (at point of diversion from Lewisville Lake). Taken from column [38] of Table C-6 from previous day's calculations. Computed quantity.
<i>Available Chapman Lake Reuse Water (CLRW) (at WTP)</i>	C1-16	Amount of Chapman Lake water available for reuse on given day, referenced to treated water side of WTP.
<i>Potential CLRW Used by CL Customers</i>	C1-16c	Interim calculation of potential Chapman Lake Reuse water used by Chapman Lake Water Customers. If available CLRW ([C1-16]) is greater than total treated water supplied to "other" customers ([C1-10c]), then [C1-16c] is equal to [C1-16] – [C1-10c]. Otherwise equal to zero.
<i>CLRW Used by CL Customers</i>	C1-16d	Total amount of Chapman Lake Reuse Water used by Chapman Lake Customers.
<i>Total Raw Water Withdrawal minus CLRW</i>	C1-18	Interim calculation. If total raw water withdrawal is less than available CLRW, equal to zero. Otherwise, equal to total raw water withdrawal minus available CLRW.
<i>Potential New CLW Withdrawal (only if less than CLW Demand)</i>	C1-19	Interim calculation. If [C1-18] is less than new CLW available then equal to [C1-18]. Otherwise equal to new CLW available ([C1-7a]).

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Potential CLW Available for Supply to Other Water Customers</i>	C1-19a	Potential Chapman Lake Water available for supply to other water customers.
<i>Excess CLW used to make up difference between withdrawal and demand</i>	C1-19b	Excess Chapman Lake Water used to make up difference between withdrawal and demand.
<i>Amount of Water Calculated to be Purchased by District from Dallas/Denton</i>	C1-20	Remaining demand that cannot be satisfied by CLW or CLRW.

**Table C-2**

This table contains all calculations pertaining to an individual customer of a regional WWTP. Each column is described in detail below.

<b>FIELD</b>	<b>COLUMN #</b>	<b>DESCRIPTION</b>
<i>Delivered District Water to [Name of Customer]</i>	C2-17	Total amount of treated water delivered to this particular Chapman Lake water customer (from Table I-2).
<i>CLW Delivered to [Name of Customer] (at customer meter)</i>	C2-18	Amount of Chapman Lake water delivered to this particular Chapman Lake water customer. Computed quantity, based on percentage of Chapman Lake water computed in Column [12] of Table C-1.
<i>Treated CLW Pumped to [Name of Customer] (at WTP)</i>	C2-19	Amount of Chapman Lake water provided to this particular Chapman Lake water customer, referenced to the discharge of the WTP. Losses between the WTP discharge and the customer meter are added to the value in Column [C2-18] to compute this quantity.
<i>Return Flow Percentage</i>	C2-20	Return flow percentage for the WWTP used by this water customer (from Table I-1).
<i>CLW in WWTP Discharge from Customer (CWRP)</i>	C2-21	Portion of Chapman Lake water return flow in WWTP discharge attributed to this particular customer.
<i>WWTP Measured Discharge</i>	C2-22	Measured WWTP discharge from WWTP serving this particular customer (from Table I-3).
<i>WWTP Distance from Lewisville Lake</i>	C2-22a	Distance of WWTP discharge point to water surface of Lewisville Lake.



FIELD	COLUMN #	DESCRIPTION
		Obtained from Stream Distance Lookup Table (attached) relating distance to water surface elevation.
<i>Channel Loss Factor (LF)</i>	C2-23	Channel loss factor (expressed as fraction of total Chapman Lake water in WWTP discharge). Computed as described in section 4.2(c) 5. of the reuse agreement.
<i>Channel Losses</i>	C2-24	Amount of Chapman Lake water lost to channel losses, attributed to this individual customer.
<i>CWRF less Channel Losses</i>	C2-25	Chapman water return flow minus channel losses, attributed to this individual customer.

**Table C-3**

This table computes the sum of relevant columns from Table C-2, for all individual customers of a regional WWTP. In addition, consideration of any direct or indirect reuse losses is included in this table. Each column is described in detail below.

FIELD	COLUMN #	DESCRIPTION
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C3-26	Amount of Chapman Lake water delivered to all customers of this WWTP (referenced to customer meters). Sum of column [18] for all customers of this WWTP.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C3-27	Amount of Chapman Lake water provided to all customers of this WWTP, referenced to the discharge of the WTP. Sum of column [19] for all customers of this WWTP.
<i>CLW in WWTP Discharge (CWRF)</i>	C3-28	Portion of Chapman Lake water return flow in WWTP discharge. Sum of column [21] for all customers of this WWTP.
<i>Channel Losses</i>	C3-29	Amount of Chapman Lake water lost to channel losses following discharge from the WWTP. Sum of column [24] for all customers of this WWTP.
<i>Direct/Indirect Reuse Losses</i>	C3-30	Amount of Chapman Lake water lost to direct or indirect reuse (from Table I-3).
<i>Available Chapman Lake Reuse Water</i>	C3-31	Chapman Lake water available for reuse, attributed to this WWTP, following

FIELD	COLUMN #	DESCRIPTION
		subtraction of channel and direct/indirect reuse losses.
<i>WWTP Measured Discharge</i>	C3-32	Measured WWTP discharge from this particular WWTP (from Table I-3).

**Tables C-4 and C-5**

These tables are identical in format to Tables C-2 and C-3, except that they apply to customers whose wastewater is treated at an individual WWTP, rather than a regional WWTP. Table C-4 contains computed quantities for each individual customer and Table C-5 sums all relevant quantities for all individual customers. Since these tables are identical in format to Tables C-2 and C-3, detailed descriptions of each column will not be repeated here.

**Table C-6**

This table computes the sum of relevant columns from Tables C-3 and C-5, for all WWTP customers (both individual and regional) included in the accounting model. Each column is described in detail below.

FIELD	COLUMN #	DESCRIPTION
<i>CLW Delivered to CL Water Customers (at customer meter)</i>	C6-33	Amount of Chapman Lake water delivered to all customers of all WWTPs (referenced to customer meters). Sum of column [26] from Tables C-3 and C-5.
<i>Treated CLW Pumped to CL Water Customers (at WTP)</i>	C6-34	Amount of Chapman Lake water provided to all customers of all WWTPs, referenced to the discharge of the WTP. Sum of column [27] from Tables C-3 and C-5.
<i>CLW in WWTP Discharge (CWRP)</i>	C6-35	Amount of Chapman Lake water return flow in WWTP discharge from all WWTPs. Sum of column [28] from Tables C-3 and C-5.
<i>Channel Losses</i>	C6-36	Total amount of Chapman Lake water lost to channel losses from all WWTPs. Sum of column [29] from Tables C-3 and C-5.
<i>Direct/Indirect Reuse Losses</i>	C6-37	Total amount of Chapman Lake water lost to direct or indirect reuse. Sum of column [30] from Tables C-3 and C-5.
<i>Available Chapman Lake Reuse Water</i>	C6-38	Total amount of Chapman Lake water available for reuse, following subtraction of channel and direct/indirect reuse

FIELD	COLUMN #	DESCRIPTION
		losses. Sum of column [31] from Tables C-3 and C-5.
<i>Total WWTP Measured Discharge</i>	C6-39	Total measured WWTP discharge from all WWTPs. Sum of column [32] from Tables C-3 and C-5.
<i>Unconsumed CL Water Returned to Lake (on following day)</i>	C6-40	Amount of Chapman Lake reuse water returned to Lewisville Lake following all authorized District uses (see section 5.3 (i) 1. of reuse agreement).

### Summary Tables S-1 and S-2

These tables contain the summary information to be reported to Dallas and Denton on a regular basis. Table S-1 provides a monthly summary of measured and computed values, as required in section 5.3 of the reuse agreement. Table S-2 will be provided on an annual basis and includes an annual summary of values from the monthly summary tables. All columns contained in the summary tables reference columns contained either in the input or calculation sheets. Therefore, a separate detailed description of these tables will not be presented here.

# **Exhibit H**



**Upper Trinity Regional Water District**

August 30, 2017

Accounting Plan with text file available upon request

Contact Mr. Chris Kozlowski at (512) 239-1801