

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION FOR A WATER USE PERMIT

APPLICATION NO. 13476

The City of Midland seeks authorization to use the bed and banks of Midland Draw, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows, authorized by Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010223001, for subsequent diversion and use for municipal, industrial, and mining purposes in Midland County. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** City of Midland, Applicant, P.O. Box 1152, Midland, Texas 79702-1152, has applied to the Texas Commission on Environmental Quality (TCEQ) for a Water Use Permit pursuant to Texas Water Code (TWC) § 11.042, and TCEQ Rules Title 30 Texas Administrative Code (TAC) § 295.1, et seq. Mailed notice to the downstream water right holders of record in the Colorado River Basin is required pursuant to 30 Texas Administrative Code (TAC) § 295.161.

The City of Midland (City/Applicant) seeks authorization to use the bed and banks of Midland Draw, tributary of Johnson Draw, tributary of Mustang Creek, tributary of Beals Creek, tributary of the Colorado River, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows for subsequent diversion from a reach on Midland Draw for municipal, industrial, and mining purposes in Midland County.

The City owns and operates the Midland Water Pollution Control No. 1 Wastewater Treatment Facility, authorized by TPDES Permit No. WQ0010223001, with a total discharge of approximately 23,500 acre-feet of water per year (21 million gallons per day).

The return flows are discharged at a point on Midland Draw located at Latitude 31.997412° N, Longitude 102.016285° W, in Midland County in ZIP Code 79706.

Applicant seeks to divert its return flows from a reach on Midland Draw, at a maximum combined diversion rate of 68 cfs (30,521 gpm), with the proposed upstream point located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County in zip code 79706 and the proposed downstream point located at Latitude 31.909041° N, Longitude 101.768176° W, in Glasscock County in ZIP Code 79739.

The daily amount of groundwater and surface water-based return flows available for diversion will be determined through an accounting plan.

The application and partial fees were received on January 19, 2018. Additional information and fees were received on April 6, and June 4, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on June 22, 2018. Additional information was received on October 20, 2021, July 6, 2022, September 30, 2022, and January 31, 2025.

The Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if granted, would include special conditions including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and

Executive Director's draft permit 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 April 16, 2025. 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 April 16, 2025. The Executive Director can consider an approval of the application unless a written request for a contested case hearing is filed by April 16, 2025.

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 to 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 13476 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: March 14, 2025

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## WATER USE PERMIT

PERMIT NO. 13476 TYPE § 11.042

Permittee: City of Midland Address: P.O. Box 1152  
Midland, Texas 79702-1152

Filed: June 22, 2018 Granted:

Purposes: Municipal, Industrial, and Mining County: Midland

Watercourse: Midland Draw, tributary of Johnson  
Draw, tributary of Mustang Creek,  
tributary of Beals Creek, tributary  
of the Colorado River Watershed: Colorado River Basin

WHEREAS, the City of Midland (City/Applicant) seeks authorization to use the bed and banks of Midland Draw, tributary of Johnson Draw, tributary of Mustang Creek, tributary of Beals Creek, tributary of the Colorado River, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows, for subsequent diversion, from a reach on Midland Draw for municipal, industrial, and mining purposes in Midland County; and

WHEREAS, the City owns and operates the Midland Water Pollution Control No. 1 Wastewater Treatment Facility, authorized by Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010223001, with a total discharge of approximately 23,500 acre-feet of water per year (21 million gallons per day); and

WHEREAS, the return flows are discharged at a point on Midland Draw located at Latitude 31.997412° N, Longitude 102.016285° W, in Midland County; and

WHEREAS, Applicant seeks to divert its return flows from a reach on Midland Draw, at a maximum combined diversion rate of 68 cfs (30,521 gpm), with the proposed upstream point located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County and the proposed downstream point located at Latitude 31.909041° N, Longitude 101.768176° W, in Glasscock County; and

WHEREAS, the daily amount of groundwater and surface water-based return flows available for diversion will be determined through the City's accounting plan; and

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

WHEREAS, Applicant has provided, and the Executive Director has approved, an accounting plan (*City of Midland Indirect Reuse Accounting Plan Water Use Permit No.13476, as Amended*) which calculates the daily amount of groundwater and surface water-based return flows available for diversion; and

WHEREAS, the Executive Director recommends that special conditions be included in the permit; 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, this permit, designated as Water Use Permit No. 13476, is issued to the City of Midland, subject to the following terms and conditions:

1. USE

Permittee is authorized to use the bed and banks of Midland Draw, to convey 23,500 acre-feet of its groundwater and surface water-based return flows for subsequent diversion and use for municipal, industrial, and mining purposes in Midland County.

2. DISCHARGE

The groundwater and surface water-based return flows are discharged, pursuant to TPDES Permit No. WQ0010223001, at a point on Midland Draw, located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County.

3. DIVERSION

A. Permittee is authorized to divert its return flows from a reach on Midland Draw, with the upstream point located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County and the downstream point located at Latitude 31.909041° N, Longitude 101.768176° W in Glasscock County.

B. The maximum combined diversion rate is 68 cfs (30,521 gpm).

4. PRIORITY DATE

A. Permittee's surface water-based return flows authorized to be conveyed via the bed and banks of a State watercourse have a priority date of June 22, 2018.

B. Permittee's groundwater-based return flows authorized to be conveyed via the bed and banks of a State watercourse in this permit do not have a priority date and are not subject to priority calls from downstream water rights.

5. CONSERVATION

Permittee 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, and 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 water supply 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 shall have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures.

6. SPECIAL CONDITIONS

- A. Permittee shall implement reasonable measures in order to reduce impacts to aquatic resources due to entrainment or impingement. Such measures shall include, but shall not be limited to, the installation of screens at diversion structures.
- B. Permittee shall not divert water from the diversion reach unless streamflow equals or exceeds 0.1 cfs as measured at the downstream point of the diversion reach on Midland Draw.
- C. Diversions of return flows authorized by this permit 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 permit. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion of return flows under this permit and either apply to amend the permit, or voluntarily forfeit the permit. If Permittee does not amend or forfeit the permit, the Commission may begin proceedings to cancel this permit.
- D. Permittee shall only divert the daily groundwater and surface water-based return flows that are actually discharged, less losses.
- E. 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 (*City of Midland Indirect Reuse Accounting Plan Water Use Permit No. 13476, as Amended*). 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 under this permit, and either apply to amend the permit, or voluntarily forfeit the permit. If Permittee fails to amend the accounting plan or forfeit the permit, the Commission may begin proceedings to cancel the permit. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- F. Prior to reuse of return flows in excess of the amount currently authorized by TPDES Permit No. WQ0010223001, Permittee shall apply for and be granted the right to reuse those return flows.
- G. Permittee shall install and maintain a measuring device which accounts for, within 5% accuracy, the quantity of water diverted from the points authorized above in Paragraph 3. DIVERSION and maintain measurement records.
- H. Permittee shall allow representatives of the Texas Commission on Environmental Quality reasonable access to the property to inspect the measuring device and records.

This permit is issued subject to all superior and senior water rights in the Colorado 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.

-----  
For the Commission

Date Issued:

DRAFT

## Hal Bailey

---

**From:** Stein, Zachary [REDACTED]  
**Sent:** Monday, March 10, 2025 9:49 AM  
**To:** Hal Bailey  
**Cc:** Humberto Galvan; Chris Kozlowski; Carl Craigo; Alma McCammond; Lemonds, Paula Jo  
**Subject:** RE: City of Midland Application No. 13476 Draft Permit/Notice Applicant Review

Mr. Bailey,

The City has no comments or edits to the documents provided by TCEQ staff on 24Feb2025 which include the draft permit, tech memos and notice.

Thanks,

**ZACH STEIN** P.E.  
D 512.498.4702 M 830.534.2183

[hdrinc.com/follow-us](https://hdrinc.com/follow-us)

---

**From:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Sent:** Monday, February 24, 2025 4:14 PM  
**To:** Stein, Zachary [REDACTED]  
**Cc:** Humberto Galvan <Humberto.Galvan@tceq.texas.gov>; Chris Kozlowski <chris.kozlowski@tceq.texas.gov>  
**Subject:** City of Midland Application No. 13476 Draft Permit/Notice Applicant Review

**CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.**

Good afternoon Zach,

Electronic copies of the drafts of the public notice and proposed water use permit no. 13476 are attached.

Also attached are copies of the related technical memoranda. Please review the draft documents and provide any comments and/or edits by COB on 03/10/2025.

If you have any questions, please let me know.

Thank you,

*Hal E. Bailey, Jr.*  
*Natural Resources Specialist III*  
*Water Rights Permitting Team*  
*Water Availability Division*  
*Texas Commission on Environmental Quality*  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)

Brooke T. Paup, *Chairwoman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 24, 2025

Mr. Zach Stein  
HDR, Inc  
4401 West Gate Blvd., Suite 400  
Austin, Texas 78745-1469

**VIA E-MAIL**

RE: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

Dear Mr. Stein:

Drafts, subject to revision, of the public notice, proposed Water Use Permit No. 13476, and the related technical memoranda 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 March 10, 2025 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 Water Use Permit No. 13476 may be issued as drafted given no hearing requests are received.

If you have any questions concerning this matter, please contact me via email at [hal.bailey@tceq.texas.gov](mailto:hal.bailey@tceq.texas.gov) or by telephone at (512) 239-4615.

Sincerely,

A handwritten signature in cursive script that reads "Hal E. Bailey, Jr.".

Hal E. Bailey, Jr., Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Attachments

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## NOTICE OF AN APPLICATION FOR A WATER USE PERMIT

APPLICATION NO. 13476

The City of Midland seeks authorization to use the bed and banks of Midland Draw, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows, authorized by Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010223001, for subsequent diversion and use for municipal, industrial, and mining purposes in Midland County. More information on the application and how to participate in the permitting process is given below.

**APPLICATION.** City of Midland, Applicant, P.O. Box 1152, Midland, Texas 79702-1152, has applied to the Texas Commission on Environmental Quality (TCEQ) for a Water Use Permit pursuant to Texas Water Code (TWC) § 11.042, and TCEQ Rules Title 30 Texas Administrative Code (TAC) § 295.1, et seq. Mailed notice to the downstream water right holders of record in the Colorado River Basin is required pursuant to 30 Texas Administrative Code (TAC) § 295.161.

The City of Midland (City/Applicant) seeks authorization to use the bed and banks of Midland Draw, tributary of Johnson Draw, tributary of Mustang Creek, tributary of Beals Creek, tributary of the Colorado River, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows for subsequent diversion from a reach on Midland Draw for municipal, industrial, and mining purposes in Midland County.

The City owns and operates the Midland Water Pollution Control No. 1 Wastewater Treatment Facility, authorized by TPDES Permit No. WQ0010223001, with a total discharge of approximately 23,500 acre-feet of water per year (21 million gallons per day).

The return flows are discharged at a point on Midland Draw located at Latitude 31.997412° N, Longitude 102.016285° W, in Midland County in ZIP Code 79706.

Applicant seeks to divert its return flows from a reach on Midland Draw, at a maximum combined diversion rate of 68 cfs (30,521 gpm), with the proposed upstream point located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County in zip code 79706 and the proposed downstream point located at Latitude 31.909041° N, Longitude 101.768176° W, in Glasscock County in ZIP Code 79739.

The daily amount of groundwater and surface water-based return flows available for diversion will be determined through an accounting plan.

The application and partial fees were received on January 19, 2018. Additional information and fees were received on April 6, and June 4, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on June 22, 2018. Additional information was received on October 20, 2021, July 6, 2022, September 30, 2022, and January 31, 2025.

The Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if granted, would include special conditions including, but not limited to, maintaining an accounting plan. The application, technical memoranda, and Executive Director's draft permit 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 can consider an approval of 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 to 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 13476 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



## WATER USE PERMIT

PERMIT NO. 13476 TYPE §§ 11.121, 11.042

Permittee: City of Midland Address: P.O. Box 1152  
Midland, Texas 79702-1152

Filed: June 22, 2018 Granted:

Purposes: Municipal, Industrial, and Mining County: Midland

Watercourse: Midland Draw, tributary of Johnson Draw, tributary of Mustang Creek, tributary of Beals Creek, tributary of the Colorado River Watershed: Colorado River Basin

WHEREAS, the City of Midland (City/Applicant) seeks authorization to use the bed and banks of Midland Draw, tributary of Johnson Draw, tributary of Mustang Creek, tributary of Beals Creek, tributary of the Colorado River, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows, for subsequent diversion, from a reach on Midland Draw for municipal, industrial, and mining purposes in Midland County; and

WHEREAS, the City owns and operates the Midland Water Pollution Control No. 1 Wastewater Treatment Facility, authorized by Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010223001, with a total discharge of approximately 23,500 acre-feet of water per year (21 million gallons per day); and

WHEREAS, the return flows are discharged at a point on Midland Draw located at Latitude 31.997412° N, Longitude 102.016285° W, in Midland County; and

WHEREAS, Applicant seeks to divert its return flows from a reach on Midland Draw, at a maximum combined diversion rate of 68 cfs (30,521 gpm), with the proposed upstream point located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County and the proposed downstream point located at Latitude 31.909041° N, Longitude 101.768176° W, in Glasscock County; and

WHEREAS, the daily amount of groundwater and surface water-based return flows available for diversion will be determined through the City's accounting plan; and

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

WHEREAS, Applicant has provided, and the Executive Director has approved, an accounting plan (*City of Midland Indirect Reuse Accounting Plan Water Use Permit No.13476, as Amended*) which calculates the daily amount of groundwater and surface water-based return flows available for diversion; and

WHEREAS, the Executive Director recommends that special conditions be included in the permit; 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, this permit, designated as Water Use Permit No. 13476, is issued to the City of Midland, subject to the following terms and conditions:

1. USE

Permittee is authorized to use the bed and banks of Midland Draw, to convey 23,500 acre-feet of its groundwater and surface water-based return flows for subsequent diversion and use for municipal, industrial, and mining purposes in Midland County.

2. DISCHARGE

The groundwater and surface water-based return flows are discharged, pursuant to TPDES Permit No. WQ0010223001, at a point on Midland Draw, located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County.

3. DIVERSION

A. Permittee is authorized to divert its return flows from a reach on Midland Draw, with the upstream point located at Latitude 31.997412° N, Longitude 102.016285° W in Midland County and the downstream point located at Latitude 31.909041° N, Longitude 101.768176° W in Glasscock County.

B. The maximum combined diversion rate is 68 cfs (30,521 gpm).

4. PRIORITY DATE

A. Permittee's surface water-based return flows authorized to be conveyed via the bed and banks of a State watercourse have a priority date of June 22, 2018.

B. Permittee's groundwater-based return flows authorized to be conveyed via the bed and banks of a State watercourse in this permit do not have a priority date and are not subject to priority calls from downstream water rights.

5. CONSERVATION

Permittee 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, and 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 water supply 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 shall have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures.

6. SPECIAL CONDITIONS

- A. Permittee shall implement reasonable measures in order to reduce impacts to aquatic resources due to entrainment or impingement. Such measures shall include, but shall not be limited to, the installation of screens at diversion structures.
- B. Permittee shall not divert water from the diversion reach unless streamflow equals or exceeds 0.1 cfs as measured at the downstream point of the diversion reach on Midland Draw.
- C. Diversions of return flows authorized by this permit 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 permit. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion of return flows under this permit and either apply to amend the permit, or voluntarily forfeit the permit. If Permittee does not amend or forfeit the permit, the Commission may begin proceedings to cancel this permit.
- D. Permittee shall only divert the daily groundwater and surface water-based return flows that are actually discharged, less losses.
- E. 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 (*City of Midland Indirect Reuse Accounting Plan Water Use Permit No. 13476, as Amended*). 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 under this permit, and either apply to amend the permit, or voluntarily forfeit the permit. If Permittee fails to amend the accounting plan or forfeit the permit, the Commission may begin proceedings to cancel the permit. Permittee shall immediately notify the Executive Director upon modification of the accounting plan and provide copies of the appropriate documents effectuating such changes.
- F. Prior to reuse of return flows in excess of the amount currently authorized by TPDES Permit No. WQ0010223001, Permittee shall apply for and be granted the right to reuse those return flows.
- G. Permittee shall install and maintain a measuring device which accounts for, within 5% accuracy, the quantity of water diverted from the points authorized above in Paragraph 3. DIVERSION and maintain measurement records.
- H. Permittee shall allow representatives of the Texas Commission on Environmental Quality reasonable access to the property to inspect the measuring device and records.

This permit is issued subject to all superior and senior water rights in the Colorado 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.

-----  
For the Commission

Date Issued:

DRAFT

## **Texas Commission on Environmental Quality**

---

### INTEROFFICE MEMORANDUM

To: Hal Bailey, Project Manager  
Water Rights Permitting Team

Date: March 26, 2024

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: City of Midland  
WRPERM 13476  
CN 600246813  
Midland Draw, Colorado River Basin  
Midland County

### **HYDROLOGY REVIEW**

#### **Application Summary**

The City of Midland (City) requests authorization to use the bed and banks of Midland Draw, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows for subsequent diversion and use for municipal, industrial, and mining purposes in Midland County. The return flows will be diverted at a maximum rate of 68 cfs (30,521 gpm). The City owns and operates the Midland Water Pollution Control No. 1 Wastewater Treatment Facility authorized by Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010223001, with a total discharge of approximately 23,500 acre-feet of water per year (21 million gallons per day).

The City submitted an accounting plan on October 20, 2021. The accounting plan was subsequently revised on July 6, 2022, and a final version was submitted on September 30, 2022.

The application was declared administratively complete on June 22, 2018.

## Hydrology Review

Resource Protection Staff recommended that the application be subject to instream flow requirements. Specific instream flow requirements are included in the Resource Protection Memo dated December 9, 2022.

The application does not request a new appropriation of water; therefore, a water availability analysis is not necessary. However, the application must be reviewed to ensure that the request does not affect other water rights.

Regarding the request to use the bed and banks of Midland Draw to convey surface water and groundwater-based return flows, the application included the information required in 30 Texas Administrative Code (TAC) § 295.112 and 295.113.

In evaluating whether the City's reuse of return flows would affect senior water rights, staff notes that no water rights can be affected because no water rights have been granted based on the return flows requested in the application.

The City submitted an accounting plan (*City of Midland Indirect Reuse Accounting Plan Water Use Permit No.13476, as Amended*) that tracks the amount of discharged groundwater and surface water-based return flows, losses (82%), travel time (1 day) over the 20.1-mile conveyance reach, instream flow requirements, and the amount of return flows diverted from Midland Draw. Staff reviewed the accounting plan and found it to be acceptable. In addition, Staff believes that the loss rate of 82 percent is a conservative estimate. Maintenance of the accounting plan should ensure that only discharged return flows are diverted so senior water rights are protected. Therefore, Staff's opinion is that any possible impacts on existing basin water rights, should those impacts be determined to exist, would be mitigated by the accounting plan.

## Conclusion

Staff can support granting the application and recommends that the following special conditions be included in the permit.

1. Diversions of return flows authorized by this permit 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 permit. Should the discharges become permanently unavailable for diversion, Permittee shall immediately cease diversion of return flows under this permit and either apply to amend the permit, or voluntarily forfeit the permit. If Permittee does not amend or forfeit the permit, the Commission may begin proceedings to cancel this permit.

2. Permittee shall only divert the daily return flows that are actually discharged, less losses.
3. Permittee shall only divert and use return flows pursuant to Paragraph 1. USE and Paragraph 2. DIVERSION in accordance with the most recently approved accounting plan (City of Midland Indirect Reuse Accounting Plan Water Use Permit No.13476, as Amended). 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 under this permit, and either apply to amend the permit, or voluntarily forfeit the permit. If Permittee fails to amend the accounting plan or forfeit the permit, the Commission may begin proceedings to cancel the permit. 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 reuse of return flows in excess of the amount currently authorized by TPDES Permit No. WQ0010223001, Permittee shall apply for and be granted the right to reuse those return flows.



---

Andrew Garcia, Hydrologist

# Texas Commission on Environmental Quality

---

## INTEROFFICE MEMORANDUM

To: Hal Bailey, Project Manager Date: December 9, 2022

Through: Leslie Patterson, Team Leader   
Resource Protection Team

From: Jade Rutledge, Aquatic Scientist  
Resource Protection Team

Subject: City of Midland  
WRPERM 13476  
CN600246813  
Midland Draw, Colorado River Basin  
Midland 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

The City of Midland (City) requests authorization to use the bed and banks of Midland Draw, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows for subsequent diversion and use for municipal, industrial, and mining purposes in Midland County. The return flows will be diverted at a maximum rate of 68 cfs (30,521 gpm). The City owns and operates the Midland Water Pollution Control No. 1 Wastewater Treatment Facility authorized by Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010223001, with a total discharge of approximately 23,500 acre-feet of water per year (21 million gallons per day).

### ENVIRONMENTAL ANALYSIS

**Aquatic and Riparian Habitats:** The proposed diversion reach is on Midland Draw, which is an intermittent stream with perennial pools. The City's proposed project is in the Llano Estacado and Arid Llano Estacado ecoregions (Griffith et. al. 2004).

The checklist for the Colorado basin identified 7 species of ichthyofauna occurring within Midland County (Hendrickson and Cohen 2015). According to the *County List of Protected Species and Species of Greatest Conservation Need*, there are no

federally listed or high interest aquatic or aquatic-dependent species that occur in Midland County (TPWD 2015). This amendment is not expected to have an effect on any high interest aquatic species because no additional state water will be taken.

The City has agreed to install screens on any new diversion structures in order to minimize entrainment and impingement of aquatic organisms. The City's request is not expected to adversely impact aquatic and riparian habitats in the area.

The TCEQ regulates bed and banks authorizations to convey groundwater and surface water-based effluent under the authority of TWC §11.042. That provision allows the commission to place special conditions in the authorization to "maintain instream uses and freshwater inflows to bays and estuaries." On August 8, 2012, the TCEQ adopted environmental flow standards for the Colorado and Lavaca Rivers, and Matagorda and Lavaca Bays (Title 30 Texas Administrative Code (TAC) Chapter 298 Subchapter D). These environmental flow standards are considered adequate to support a sound ecological environment (Title 30 TAC §298.310). This review is conducted in accordance with §11.042 of the TWC, and although this is not a new appropriation of water, will utilize TCEQ administrative rules which include Title 30 TAC Chapter 298 Subchapter D to provide consistency in water rights administration. Resource Protection staff recommend a streamflow restriction that is intended to protect the stream from dewatering. Resource Protection staff utilized the subsistence and base environmental flow standards (Title 30 TAC §298.330) established at United States Geological Survey (USGS) Gage No. 08123850 – Colorado River above Silver, TX for the streamflow restriction as shown in Table 1.

**Table 1. Environmental Flow Values at USGS Gage No. 08123850 – Colorado River above Silver, TX**

<b>Season</b>	<b>Subsistence Flow</b>	<b>Base Flow</b>
Winter	1 cfs	2 cfs
Spring	1 cfs	2 cfs
Summer	1 cfs	1 cfs
Fall	1 cfs	1 cfs

cfs = cubic feet per second

The City has requested that compliance with the environmental flow values in Table 1 be measured at the downstream point of the diversion reach on Midland Draw immediately upstream of the confluence with Johnson Draw. The City further requested that compliance with the environmental flow values for subsistence and base flows utilize a drainage area ratio to determine the flows that must pass the downstream point of the diversion reach. The City translated the subsistence and base flow values in Table 1 using a drainage area ratio from the drainage area of USGS Gage No. 08123850 – Colorado River above Silver, TX to the drainage area of the City's downstream diversion point. Resource Protection staff reviewed the

information submitted by the City, including the translated values, and agree that using the translated values for subsistence and base flows and applying those values at the City's downstream point would be protective. Resource Protection staff's recommendations are shown in Table 2.

**Table 2. Environmental Flow Values at the City of Midland's downstream point of the diversion reach on Midland Draw**

<b>Season</b>	<b>Subsistence Flow</b>	<b>Base Flow</b>
Winter	0.03 cfs	0.06 cfs
Spring	0.03 cfs	0.06 cfs
Summer	0.03 cfs	0.03 cfs
Fall	0.03 cfs	0.03 cfs

cfs = cubic feet per second

The applicable subsistence and base flow values depend on the season. Seasons are defined in Title 30 TAC § 298.305. as follows: Winter (November through February), Spring (March through June), Summer (July through August), and Fall (September through October). Given the similarities between the pro-rated subsistence and base flow values, the base flow values alone are considered sufficient to provide adequate protection for the environment. The base flow values were rounded to 0.1 cfs. Staff recommend that diversion of water under this proposed permit should be limited to comply with a 0.1 cfs streamflow restriction.

**Recreational Uses:** Mustang Draw has a presumed primary contact recreation 1 use (TCEQ 2022). The City's request should not adversely impact recreational uses.

**Water Quality:** Midland Draw has a presumed limited aquatic life use (TCEQ 2022). The City'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. The application does not request a new appropriation of water. Therefore, the City's request should not have any impact to Matagorda Bay.

## **RECOMMENDATIONS**

Resource Protection staff recommends the following Special Conditions be included in the proposed permit, if granted:

1. Permittee shall implement reasonable measures in order to reduce impacts to aquatic resources due to entrainment or impingement. Such measures

shall include, but shall not be limited to, the installation of screens at diversion structures.

2. Permittee shall not divert water from the diversion reach unless streamflow equals or exceeds 0.1 cfs as measured at the downstream point of the diversion reach on Midland Draw.

#### **LITERATURE CITED**

Griffith, G.E., S.A. Bryce, J.M. Omernik, J.A. Comstock, A.C. Rogers, B. Harrison, S.L. Hatch, and D. Bezanson. 2004. Ecoregions of Texas. (2 sided color poster with map, descriptive text, and photographs). U.S. Geological Survey, Reston, VA. Scale 1:2,500,000.

Hendrickson DA, Cohen AE. 2015. Fishes of Texas Project Database [Internet]. [2022 Jan 25]; Version 2.0. Available from <http://www.fishesoftexas.org/home/> doi:10.17603/C3WC70.

TCEQ. 2022. Texas Surface Water Quality Standards §§307.1-307.10. Austin (TX): Texas Commission on Environmental Quality.

TPWD. 2015. TPWD County Lists of Texas Protected Species and Species of Greatest Conservation Need [Internet]. Austin (TX): Midland County, revised October 1, 2021. [2022 Jan 25]. Available from <http://tpwd.texas.gov/gis/rtest/>.



---

Jade Rutledge, Aquatic Scientist

# Texas Commission on Environmental Quality

---

## INTEROFFICE MEMORANDUM

**To:** Hal Bailey, Project Manager  
Water Rights Permitting Team

**Date:** December 8, 2022

**Through:** Leslie Patterson, Team Leader   
Resource Protection Team

**From:** Trent Jennings, Water Conservation Specialist  
Resource Protection Team

**Subject:** City of Midland  
WRPERM 13476  
CN600246813  
Midland Draw, Colorado River Basin  
Midland County

### APPLICATION SUMMARY

The City of Midland (City) requests authorization to use the bed and banks of Midland Draw, Colorado River Basin, to convey 23,500 acre-feet of groundwater and surface water-based return flows for subsequent diversion and use for municipal, industrial, and mining purposes in Midland County. The return flows will be diverted at a maximum rate of 68 cfs (30,521 gpm). The City owns and operates the Midland Water Pollution Control No. 1 Wastewater Treatment Facility authorized by Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010223001, with a total discharge of approximately 23,500 acre-feet of water per year (21 million gallons per day).

### WATER CONSERVATION REVIEW

Pursuant to Title 30 Texas Administrative Code (TAC) §295.9(1), the additional use of state water requires a water conservation review.

While this review is specifically triggered by the portion of this application that pertains to the additional use of surface water-based return flows, the review evaluates the City's entire water system.

The purpose of this review is to:

- (1) determine whether reasonable water conservation goals have been set;
- (2) determine whether the proposed strategies can achieve the stated goals;
- (3) determine whether there is a substantiated need for the water and whether the amount to be appropriated is reasonable for the proposed use; and
- (4) determine whether the water conservation plan addresses a water supply need in a manner that is consistent with the state water plan and the relevant approved regional water plan.

If these criteria are met, then staff considers this sufficient evidence to conclude that the applicant will avoid waste and achieve water conservation. This review

forms a basis for permit conditions and limitations as provided by Texas Water Code (TWC) §11.134.

### **Water Conservation Goals and Strategies**

Resource Protection staff reviewed the water conservation and drought contingency plans for municipal use and found that the plans meet the requirements in 30 TAC Chapter 288. The City is also requesting industrial and mining uses for the 23,500 acre-feet of groundwater and surface water-based return flows and plans to contract the water as a wholesale water provider.

The City's 2021 Water Conservation Plan includes the following water conservation measures:

- **Accurate Metering and Replacement:** The City's water deliveries are metered within an accuracy of plus or minus five percent and are calibrated on an annual basis to maintain the required accuracy. Meters that don't meet the required standards are recalibrated or replaced.
- **Leak Detection and Repair:** Water audits are conducted regularly in order to decrease water loss. City crews and other personnel look for and report evidence of leaks in the water distribution system, and these leaks and line breaks are repaired promptly.
- **Water Conservation Public Education and Information Program:** The City has a public education program that includes providing information on water conservation to their customers, including leak detection, water use measurement, and cost-saving methods and technology.
- **Water Rate Structure:** The current water rate structure is intended to encourage water conservation and discourage excessive use and waste of water. In 2020, the City completed a study to determine the best water rate structure to meet the City's needs.

The Water Conservation Plan also includes the following goals:

- The 5-year planning goal is to reduce gallons per capita per day water use to 180 gpcd.
- The 10-year planning goal is to reduce gallons per capita per day water use to 175 gpcd.

Resource Protection staff has deemed these measures and goals to be reasonable.

### **Requirements for Water Right Application under 30 TAC §288.7**

Under 30 TAC §288.7, a water conservation plan submitted with a water right application for a new or additional appropriation of water must include data and information which:

- (1) supports the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;
- (2) evaluates conservation as an alternative to the proposed appropriation; and
- (3) evaluates any other feasible alternative to new water development including, but not limited to, waste prevention, recycling and reuse, water transfer and

marketing, regionalization, and optimum water management practices and procedures.

### ***Consideration of Water Conservation Goals***

The City and its customers will be effectively avoiding waste and achieving water conservation through reuse of the City's treated effluent derived from privately owned and contracted groundwater and from state water contracted from the Colorado River Municipal Water District. The City has implemented a direct non-potable reuse project to supply landscape irrigation water to Midland College. Also, mining has become a prominent recipient of direct reuse in Region F. The City has contracts to supply treated wastewater to mining customers. It is anticipated that over time, mining will utilize the majority of available wastewater from the City. Authorizations granted under this Permit would reduce demands on existing raw water supply sources, thus conserving these supplies.

### ***Conservation as an Alternative to the Proposed Appropriation***

Conservation is included as a water management strategy in the 2021 Region F Water Plan. The 2021 Region F Water Plan indicates that the estimated savings from municipal conservation for the City of Midland is 631 acre-feet in 2020 and 1,012 acre-feet in 2070. In consideration of the City's future water needs, conservation alone cannot provide sufficient water to address demands.

### ***Feasible Alternatives to New Water Development***

As part of the regional water planning process and working within the planning criteria established by the Region F Water Planning Group and TWDB, general water management strategies recommended in the 2021 Region F Water Plan included: subordination, water conservation, brush control, weather modification, wastewater reuse, and desalination.

### ***Water Needs***

As the largest city in Region F, the City of Midland provides retail water to over 134,000 municipal users and small quantities of water to manufacturing within city limits. According to the 2021 Region F Water Plan, the estimated population served by the City is projected to be 169,062 by 2020 and increase to 269,070 by 2070. Additionally, based on projections, the City will begin to experience shortages in 2030, and the total demand is expected to exceed total current supply by 18,663 acre-feet in 2070.

In addition, the City has a contract to sell treated wastewater effluent to the mining industry. The 2021 Region F Water Plan mentions that the City has already acquired a contract with Pioneer Resources to provide approximately 15 MGD of treated effluent for mining purposes. Increased oil and gas activities in the Permian Basin around Midland have caused a rapid growth in city population and water service areas.

The request for authorization to divert and reuse surface water and groundwater-based return flows can help to meet the projected needs of the City and Region F.

### **Consistency with State and Regional Water Plans**

The 2016 Region F Water Plan included reuse of wastewater from the City of Midland as a water management strategy for mining users. For planning purposes, it is considered an existing supply in the 2021 Region F Water Plan to mining users in the Region. As such, the application is consistent with the 2021 Region F Water Plan and the 2022 State Water Plan.

### **RECOMMENDATIONS**

Resource Protection staff has evaluated the application and determined that it meets the review requirements.

The following water conservation language should be included in the proposed permit, if granted:

Permittee 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, and 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 water supply 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 shall have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures.

  
\_\_\_\_\_  
Trent Jennings, Water Conservation Specialist

## Hal Bailey

---

**From:** Chris Kozlowski  
**Sent:** Friday, January 31, 2025 10:47 AM  
**To:** Hal Bailey  
**Cc:** Humberto Galvan  
**Subject:** Fw: Midland Application - Revised Worksheet #3  
**Attachments:** Worksheet\_3\_DS\_Diversion\_Point\_revised.pdf

---

**From:** Stein, Zachary <[REDACTED]>  
**Sent:** Friday, January 31, 2025 9:17 AM  
**To:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>  
**Subject:** Midland Application - Revised Worksheet #3

Kathy,

Attached please find a revised Worksheet #3 for the downstream diversion point.

Thanks,

**ZACH STEIN** P.E.  
*Associate | Water Supply Section Lead*

**HDR**  
4401 West Gate Blvd., Suite 400  
Austin, TX 78745  
**D** 512.498.4702 **M** 830.534.2183  
[REDACTED]

[hdrinc.com/follow-us](https://hdrinc.com/follow-us)

# WORKSHEET 3.0

## DIVERSION POINT (OR DIVERSION REACH) INFORMATION

This worksheet **is required** for each diversion point or diversion reach. Submit one Worksheet 3.0 for **each** diversion point and two Worksheets for **each** diversion reach (one for the upstream limit and one for the downstream limit of each diversion reach).

*The numbering of any points or reach limits should be consistent throughout the application and on supplemental documents (e.g. maps).*

### 1. Diversion Information (Instructions, Page. 24)

- a. This Worksheet is to add new (select 1 of 3 below):
  - 1. \_\_\_\_\_ Diversion Point No.
  - 2. \_\_\_\_\_ Upstream Limit of Diversion Reach No.
  - 3. \_\_\_\_\_ Downstream Limit of Diversion Reach No.
  
- b. Maximum Rate of Diversion for **this new point** \_\_\_\_\_ cfs (cubic feet per second) or \_\_\_\_\_ gpm (gallons per minute)
  
- c. Does this point share a diversion rate with other points? **Y / N**  
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches \_\_\_\_\_ cfs or \_\_\_\_\_ gpm*
  
- d. For amendments, is Applicant seeking to increase combined diversion rate? **Y / N**

*\*\* An increase in diversion rate is considered a new appropriation and would require completion of Section 1, New or Additional Appropriation of State Water.*

- e. Check (√) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
	Directly from stream	
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional sheets if necessary)	

- f. Based on the Application information provided, Staff will calculate the drainage area above the diversion point (or reach limit). If Applicant wishes to also calculate the drainage area, you may do so at their option.

Applicant has calculated the drainage area. **Y / N**

If yes, the drainage area is \_\_\_\_\_ sq. miles.  
*(If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application)*

## 2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): \_\_\_\_\_
- b. Zip Code: \_\_\_\_\_
- c. Location of point: In the \_\_\_\_\_ Original Survey No. \_\_\_\_\_, Abstract No. \_\_\_\_\_, \_\_\_\_\_ County, Texas.

***A copy of the deed(s) with the recording information from the county records must be submitted describing tract(s) that include the diversion structure. For diversion reaches, the Commission cannot grant an Applicant access to property that the Applicant does not own or have consent or a legal right to access, the Applicant will be required to provide deeds, or consent, or other documents supporting a legal right to use the specific points when specific diversion points within the reach are utilized. Other documents may include, but are not limited to: a recorded easement, a land lease, a contract, or a citation to the Applicant's right to exercise eminent domain to acquire access.***

- d. Point is at:  
Latitude \_\_\_\_\_°N, Longitude \_\_\_\_\_°W.  
***Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places***
- e. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program): \_\_\_\_\_
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38.
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

## Hal Bailey

---

**From:** Stein, Zachary [REDACTED]  
**Sent:** Friday, September 30, 2022 9:31 AM  
**To:** Hal Bailey  
**Cc:** Kathy Alexander; Chris Kozlowski; Carl Craig  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2  
**Attachments:** Midland\_P13476\_Accounting\_Plan\_Narrative\_09302022.pdf; Midland\_P13476\_Accounting\_Plan\_Narrative\_09302022\_TT.pdf; Midland\_P13476\_Accounting\_Plan\_09302022.xlsm

Mr. Bailey,

In response to comments received during the 26Jul2022 meeting with TCEQ staff, attached please find an updated accounting plan and narrative for the City of Midland water right application for Permit 13476. A tracked changes version of the narrative is also attached for your convenience. A summary of substantial changes is as follows:

1. Accounting Plan – Column L of the Accounting tab has been added to include an instream flow requirement of 0.1 cfs at the end of the diversion reach.
2. Narrative – Documentation of methodology used to calculate instream flow requirement at end of proposed diversion reach has been added to the Background section.
3. Narrative – Description of Column L has been added to the User Instructions section.

Please let me know if you have any question or if you require any additional information to continue processing the application.

Thanks.

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](https://hdrinc.com/follow-us)

---

**From:** Stein, Zachary  
**Sent:** Wednesday, July 6, 2022 7:25 AM  
**To:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Cc:** Chris Kozlowski <chris.kozlowski@tceq.texas.gov>; Carl Craig [REDACTED]  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2

Mr. Bailey,

In response to the 6Jun2022 TCEQ Technical RFI, please find the attached documents.

1. Response letter
2. Updated Accounting Plan Narrative
3. Updated Accounting Plan Excel File

Should you have any questions, please do not hesitate to contact me at your convenience.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Sent:** Tuesday, June 14, 2022 10:09 AM  
**To:** Stein, Zachary [REDACTED]  
**Cc:** Chris Kozlowski <chris.kozlowski@tceq.texas.gov>  
**Subject:** City of Midland WRPERM 13476 Tech RFI #2

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Zach,

Attached is a Technical Request for Information (RFI) letter for application no. 13476.

Please provide a response by COB on 07/14/2022.

Should you have any questions, or if you need additional time to respond, please let me know.

Thank you,

*Hal E. Bailey, Jr.*  
*Natural Resources Specialist III*  
*Water Rights Permitting Team*  
*Water Availability Division*  
*Texas Commission on Environmental Quality*  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)

# **City of Midland**

## **Water Use Permit No. 13476**

Accounting plan Excel file available upon request

September 30, 2022

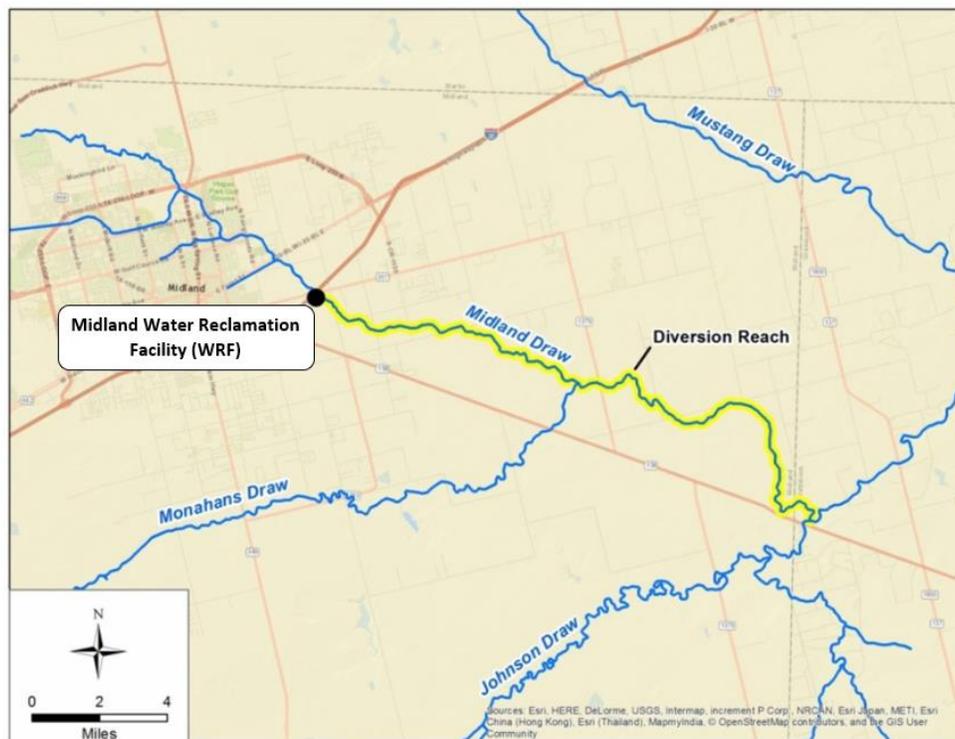
Contact Mr. Chris Kozlowski at (512) 239-1801

**City of Midland**  
**Indirect Reuse Accounting Plan**  
**Water Use Permit No. 13476**

**Background**

Water Use Permit No. 13476 authorizes the City of Midland (the “City”) to use the bed and banks of Midland Draw to transport the current and future groundwater and surface water based treated effluent return flows discharged from the Midland Water Reclamation Facility (WRF) and subsequently divert and reuse up to 23,500 acre-feet (less losses) per year of these return flows for municipal, mining, and industrial uses in Midland County. The purpose of this accounting plan is to track the daily treated effluent return flow discharges and diversions for compliance with the terms and conditions of Permit No. 13476.

The authorized 20.1 mile diversion reach of Midland Draw, beginning at the discharge point of the WRF and ending at the confluence with the Johnson Draw, is highlighted yellow in **Figure 1**. Carriage losses from the discharge location to the end of the authorized diversion reach are assumed to be 82% and a travel time of 1-day is assumed for all calculations.



**Figure 1. Map of the diversion reach of the Midland Draw southeast of Midland.**

The treated effluent return flow originates from surface water and groundwater raw water supply sources. This accounting plan tracks the volume of the groundwater and surface water sourced treated effluent return flows available for diversion at the beginning and end of the authorized diversion reach.

Source water of the treated effluent return flows consists of the following:

- Groundwater from the City’s T-Bar Ranch/Clearwater, Airport, and Paul Davis Well Fields.
- Surface Water and Groundwater Purchased from the Colorado River Municipal Water District (CRMWD)
  - O.H. Ivie Reservoir (TCEQ Permit 3676)
  - Lake E.V. Spence (CA 14-1008)
  - Lake J.B. Thomas (CA 14-1002)
  - Moss Creek Lake (CA 14-1018)
  - Pyote, Ward County, and Martin County well fields
  - Direct reuse from the raw water production facility in Big Spring, TX

The Accounting Plan tracks the source of the treated effluent return flows discharged using the source(s) of the previous day raw water supply. The calculations assume the proportion of the previous day’s raw water supply sources are equal to the proportion of the current day’s treated effluent by source. Return flows sourced from separate groundwater sources are combined in the return flow accounting. Return flows sourced from surface water are tracked from O.H. Ivie Reservoir and the combined supplies from E.V. Spence, J.B. Thomas, and Moss Creek. These reservoir sources are combined because the CRMWD combines these three supply sources in the meter data provided to the City.

An instream flow requirement of 0.1 cubic feet per second (cfs) is included in the Accounting Plan at the end of the diversion reach. The instream flow requirement is calculated by adjusting the base and subsistence environmental flow standards measured at USGS Gage No. 08123850 – Colorado River above Silver, TX (the “Silver gage”) for differences in contributing drainage area with the point located at the end of the diversion reach. **Table 1** provides the contributing drainage areas for the two locations and the calculated drainage area ratio. **Tables 2 and 3** provide the base and subsistence environmental flow standards measured at the Silver gage and the base and subsistence instream flow requirements calculated at the end of the diversion reach, respectively. For practical purposes, an instream flow requirement of 0.1 cfs (a value greater than the calculated base flow requirement) is assumed.

**Table 1. Summary of Contributing Drainage Areas.**

Location	Contributing Drainage Area (sq mi)
End of Diversion Reach (Point immediately upstream of confluence with Johnson Draw)	139 <sup>a</sup>
Gage No. 08123850 (Colorado River above Silver, TX)	4,650 <sup>b</sup>
Drainage Area Ratio	0.03

<sup>a</sup>Source: Tovar, F. H., and Maldonado, B. N., Texas Department of Water Resources, 1981, pp. 11, *Drainage Areas of Texas Streams, Colorado River Basin, LP-145*.

[https://www.twdb.texas.gov/publications/reports/limited\\_printing/doc/LP-145.pdf](https://www.twdb.texas.gov/publications/reports/limited_printing/doc/LP-145.pdf)

<sup>b</sup>Source: USGS Online Database,

[https://waterdata.usgs.gov/tx/nwis/inventory/?site\\_no=08123850&agency\\_cd=USGS](https://waterdata.usgs.gov/tx/nwis/inventory/?site_no=08123850&agency_cd=USGS)

**Table 2. Environmental Flow Standards Measured at USGS Gage No. 08123850 – Colorado River above Silver, TX.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Season	Winter		Spring			Summer		Fall		Winter		
Base Flow (cfs)	2	2	2	2	2	2	1	1	1	1	2	2
Subsistence Flow (cfs)	1	1	1	1	1	1	1	1	1	1	1	1

cfs = cubic feet per second

**Table 3. Instream Flow Requirements Calculated at End of Diversion Reach.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Season	Winter		Spring			Summer		Fall		Winter		
Base Flow (cfs)	0.06	0.06	0.06	0.06	0.06	0.06	0.03	0.03	0.03	0.03	0.06	0.06
Subsistence Flow (cfs)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03

cfs = cubic feet per second

Specific points of diversions are not authorized under Permit No. 13476. Therefore, the accounting plan assumes diversions occur at the downstream end of the authorized diversion reach. When Permit No. 13476 is amended to include specific points of diversion within the authorized diversion reach, the accounting plan will be updated by the City to account for carriage losses to the new point of diversion and calculate available return flow at the new point of diversion.

## ***User Instructions***

The Accounting Plan is to be maintained on a daily basis and stored in the City’s electronic file system. At the beginning of the calendar year, the user will need to make a copy of the previous year accounting plan spreadsheet and delete all input data from the previous year. The user must then enter the current year into cell N11 in the “Instructions & Constants”.

Daily raw water supply and treated effluent discharge data should then be entered in the “Accounting” sheet of the Accounting Plan. The user will need to enter the daily data for December 30th and 31st from the previous year in the “Accounting” sheet to account for the assumed 1-day lag from raw water delivery to discharge of treated wastewater effluent and the assumed 1-day travel time between the WRF discharge location and the end of the authorized diversion reach. The user should not modify any formulas contained in the Accounting Plan.

## ***Accounting Plan Spreadsheet***

### **Organization of Spreadsheet**

The Accounting Plan spreadsheet contains four separate tabs to organize input data, calculations, and monthly summaries. The following are descriptions of each tab and columns included in the Accounting Plan.

- **Instructions & Constants** – This tab provides background information, user instructions, and constants applied in calculating carriage losses and travel times.
- **Summary Table (ac-ft)** – This tab provides a summary of monthly discharges and diversions in acre-feet.
- **Summary Table (MG)** – This tab provides a summary of monthly discharges and diversions in millions of gallons.
- **Accounting** – This tab contains daily user input and calculations for tracking treated wastewater return flows.

### **INSTRUCTIONS TAB**

**Cell N11: Accounting Year** – Location for the user to input the accounting year. It is imperative that the user input a value because logic pertaining to dates and leap years depends upon this value.

### **SUMMARY TABLE TABS**

**Columns B and C: Month** – This is the month of the year.

**Column D: Total WRF Discharge** – The monthly sum of water discharged from the WRF and returned to Midland Draw.

**Column E: Treated Effluent Return Flow Diversion** – The monthly sum of treated effluent return flow diversions.

**Column F: Total Treated Effluent Return Flow at End of Reach** – The monthly sum of treated effluent return flow at the end of the reach after carriage losses and diversions.

**Column G: Groundwater Sourced Return Flow at End of Reach** – The monthly sum of treated effluent return flow from groundwater sources at the end of the reach after carriage losses and diversions.

**Column H: E. V. Spence & J. B. Thomas Reservoirs & Moss Creek Lake Sourced Treated Effluent Return Flow Available at End of Reach** – The monthly sum of treated effluent return flow sourced from State water (surface water) at E. V. Spence and J. B. Thomas reservoirs, and Moss Creek Lake at the end of the reach after carriage losses and diversions.

**Column I: O. H. Ivie Reservoir Sourced Treated Effluent Return Flow Available at End of Reach** – The monthly sum of treated effluent return flow sourced from State water (surface water) at O. H. Ivie Reservoir at the end of the reach after carriage losses and diversions.

#### **ACCOUNTING TAB**

**Column A: Date (mm/dd/yyyy)** – This column is automatically populated with the date once the user enters the accounting year in the Instructions Tab.

**Column B: Month** – This is the numerical month of the year.

**Column C: Total Raw Water Supply (MG)** – This is the sum of daily raw water supplies from Columns D-G.

**Columns D-G: Raw Water Supply by Source (MG)** – These columns contain the daily volume of raw water supply from each source, input by the user.

**Column H: Total Return Flow (MG)** – This column contains the daily volume of treated effluent return flow discharged into Midland Draw, input by the user.

**Columns I-K: Return Flow by Source (MG)** – These columns calculate WRF discharge from each source, distributed based on the previous day's ratio of raw water supplies.

**Columns L: Instream Flow Requirement (0.1 cfs) (MG)** – Instream flow requirement at end of reach.

**Column M: Total Available Treated Effluent Return Flow at End of Reach Before Diversion (MG)** – This column calculates the sum daily volume of treated effluent return flows from all sources at the end of the reach after calculated carriage losses and instream flow requirements that is available for diversion.

**Column N: Total Diversion at End of Reach (MG)** – This column contains the daily diversion at the end of the reach, input by the user. Conditional formatting indicates if an input value is above the volume available for diversion and is invalid.

**Column O-Q: Diversion at End of Reach (MG)** – These columns calculate the diversion volume by source.

**Column R: Total Available Treated Effluent Return Flow at End of Reach After Diversion (MG)** – This column contains the daily volume of treated return flow from all sources at the end of the reach after diversions, instream flow requirements, and calculated carriage losses.

**Column S-U: Treated Effluent Return Flow at End of Reach by Source (MG)** – These columns calculate available treated effluent return flow by source after diversion at the end of the authorized diversion reach after accounting for carriage losses.

**City of Midland**  
**Indirect Reuse Accounting Plan**  
**Water Use Permit No. 13476**

**Background**

Water Use Permit No. 13476 authorizes the City of Midland (the “City”) to use the bed and banks of Midland Draw to transport the current and future groundwater and surface water based treated effluent return flows discharged from the Midland Water Reclamation Facility (WRF) and subsequently divert and reuse up to 23,500 acre-feet (less losses) per year of these return flows for municipal, mining, and industrial uses in Midland County. The purpose of this accounting plan is to track the daily treated effluent return flow discharges and diversions for compliance with the terms and conditions of Permit No. 13476.

The authorized 20.1 mile diversion reach of Midland Draw, beginning at the discharge point of the WRF and ending at the confluence with the Johnson Draw, is highlighted yellow in **Figure 1**. Carriage losses from the discharge location to the end of the authorized diversion reach are assumed to be 82% and a travel time of 1-day is assumed for all calculations.



**Figure 1. Map of the diversion reach of the Midland Draw southeast of Midland.**

The treated ~~wastewater effluent~~ return flow originates from surface water and groundwater raw water supply sources. This accounting plan tracks the volume of the groundwater and surface water sourced ~~treated effluent~~ return flows available for diversion at the beginning and end of the authorized diversion reach.

Source water of the treated effluent ~~return flows~~ consists of the following:

- Groundwater from the City’s T-Bar Ranch/Clearwater, Airport, and Paul Davis Well Fields.
- Surface Water and Groundwater Purchased from the Colorado River Municipal Water District (CRMWD)
  - O.H. Ivie Reservoir (TCEQ Permit 3676)
  - Lake E.V. Spence (C~~e~~A 14-1008)
  - Lake J.B. Thomas (C~~e~~A 14-1002)
  - Moss Creek Lake (C~~e~~A 14-1018)
  - Pyote, Ward County, and Martin County well fields
  - Direct reuse from the raw water production facility in Big Spring, TX

The Accounting Plan tracks the source of the treated ~~wastewater water~~ effluent ~~return flows~~ discharged using the source(s) of the previous day raw water supply. The calculations assume the proportion of the previous day’s raw water supply sources are equal to the proportion of the current day’s treated ~~wastewater~~ effluent by source. Return flows sourced from ~~seperate~~separate groundwater sources are combined in the return flow accounting. Return flows sourced from surface water are tracked from O.H. Ivie Reservoir and the combined supplies from E.V. Spence, J.B. Thomas, and Moss Creek. These reservoir sources are combined because the CRMWD combines these three supply sources in the meter data provided to the City.

An instream flow requirement of 0.1 cubic feet per second (cfs) is included in the Accounting Plan at the end of the diversion reach. The instream flow requirement is calculated by adjusting the base and subsistence environmental flow standards measured at USGS Gage No. 08123850 – Colorado River above Silver, TX (the “Silver gage”) for differences in contributing drainage area with the point located at the end of the diversion reach. **Table 1** provides the contributing drainage areas for the two locations and the calculated drainage area ratio. **Tables 2 and 3** provide the base and subsistence environmental flow standards measured at the Silver gage and the base and subsistence instream flow requirements calculated at the end of the diversion reach, respectively. For practical purposes, an instream flow requirement of 0.1 cfs (a value greater than the calculated base flow requirement) is assumed.

**Table 1. Summary of Contributing Drainage Areas.**

<u>Location</u>	<u>Contributing Drainage Area (sq mi)</u>
<u>End of Diversion Reach (Point immediately upstream of confluence with Johnson Draw)</u>	<u>139<sup>a</sup></u>
<u>Gage No. 08123850 (Colorado River above Silver, TX)</u>	<u>4,650<sup>b</sup></u>
<u>Drainage Area Ratio</u>	<u>0.03</u>

<sup>a</sup>Source: Tovar, F. H., and Maldonado, B. N., Texas Department of Water Resources, 1981, pp. 11, *Drainage Areas of Texas Streams, Colorado River Basin, LP-145.*

[https://www.twdb.texas.gov/publications/reports/limited\\_printing/doc/LP-145.pdf](https://www.twdb.texas.gov/publications/reports/limited_printing/doc/LP-145.pdf)

<sup>b</sup>Source: USGS Online Database,

[https://waterdata.usgs.gov/tx/nwis/inventory/?site\\_no=08123850&agency\\_cd=USGS](https://waterdata.usgs.gov/tx/nwis/inventory/?site_no=08123850&agency_cd=USGS)

**Table 2. Environmental Flow Standards Measured at USGS Gage No. 08123850 – Colorado River above Silver, TX.**

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
<u>Season</u>	<u>Winter</u>		<u>Spring</u>			<u>Summer</u>		<u>Fall</u>		<u>Winter</u>		
<u>Base Flow (cfs)</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>
<u>Subsistence Flow (cfs)</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>

cfs = cubic feet per second

**Table 3. Instream Flow Requirements Calculated at End of Diversion Reach.**

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
<u>Season</u>	<u>Winter</u>		<u>Spring</u>			<u>Summer</u>		<u>Fall</u>		<u>Winter</u>		
<u>Base Flow (cfs)</u>	<u>0.06</u>	<u>0.06</u>	<u>0.06</u>	<u>0.06</u>	<u>0.06</u>	<u>0.06</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.06</u>	<u>0.06</u>
<u>Subsistence Flow (cfs)</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>	<u>0.03</u>

cfs = cubic feet per second

Specific points of diversions are not authorized under Permit No. 13476. Therefore, the accounting plan assumes diversions occur at the downstream end of the authorized diversion reach. When Permit No. 13476 is amended to include specific points of diversion within the authorized diversion reach, the accounting plan will be updated by the City to account for carriage losses to the new point of diversion and calculate available return flow at the new point of diversion.

## ***User Instructions***

The Accounting Plan is to be maintained on a daily basis and stored in the City’s electronic file system. At the beginning of the calendar year, the user will need to make a copy of the previous year accounting plan spreadsheet and delete all input data from the previous year. The user must then enter the current year into cell N11 in the “Instructions & Constants”.

Daily raw water supply and treated effluent discharge data should then be entered in the “Accounting” sheet of the Accounting Plan. The user will need to enter the daily data for December 30th and 31st from the previous year in the “Accounting” sheet to account for the assumed 1-day lag from raw water delivery to discharge of treated wastewater effluent and the assumed 1-day travel time between the WRF discharge location and the end of the authorized diversion reach. The user should not modify any formulas contained in the Accounting Plan.

## ***Accounting Plan Spreadsheet***

### **Organization of Spreadsheet**

The Accounting Plan spreadsheet contains four separate tabs to organize input data, calculations, and monthly summaries. The following are descriptions of each tab and columns included in the Accounting Plan.

- **Instructions & Constants** – This tab provides background information, user instructions, and constants applied in calculating carriage losses and travel times.
- **Summary Table (ac-ft)** – This tab provides a summary of monthly discharges and diversions in acre-feet.
- **Summary Table (MG)** – This tab provides a summary of monthly discharges and diversions in millions of gallons.
- **Accounting** – This tab contains daily user input and calculations for tracking treated wastewater return flows.

### **INSTRUCTIONS TAB**

**Cell N11: Accounting Year** – Location for the user to input the accounting year. It is imperative that the user input a value because logic pertaining to dates and leap years depends upon this value.

### **SUMMARY TABLE TABS**

**Columns B and C: Month** – This is the month of the year.

**Column D: Total WRF Discharge** – The monthly sum of water discharged from the WRF and returned to Midland Draw.

**Column E: Treated Effluent Return Flow Diversion** – The monthly sum of treated effluent return flow diversions.

**Column F: Total Treated Effluent Return Flow at End of Reach** – The monthly sum of treated effluent return flow available for diversion at the end of the reach after carriage losses and diversions.

**Column G: Groundwater Sourced Return Flow at End of Reach** – The monthly sum of treated effluent return flow from groundwater sources available for diversion at the end of the reach after carriage losses and diversions.

**Column H: E. V. Spence & J. B. Thomas Reservoirs & Moss Creek Lake Sourced Treated Effluent Return Flow Available at End of Reach** – The monthly sum of treated effluent return flow sourced from State water (surface water) at E. V. Spence and J. B. Thomas reservoirs, and Moss Creek Lake available for diversion at the end of the reach after carriage losses and diversions.

**Column I: O. H. Ivie Reservoir Sourced Treated Effluent Return Flow Available at End of Reach** – The monthly sum of treated effluent return flow sourced from State water (surface water) at O. H. Ivie Reservoir available for diversion at the end of the reach after carriage losses and diversions.

## ACCOUNTING TAB

**Column A: Date (mm/dd/yyyy)** – This column ~~will is~~ automatically ~~be~~ populated with the date once the user enters the accounting year in the Instructions Tab.

**Column B: Month** – This is the numerical month of the year.

**Column C: Total Raw Water Supply (MG)** – This is the sum of daily raw water supplies from Columns D-~~H~~G.

**Columns D-G: Raw Water Supply by Source (MG)** – These columns contain the daily volume of raw water supply from each source, input by the user.

**Column H: Total Return Flow (MG)** – This column contains the daily volume of treated ~~wastewater~~-effluent return flow discharged into Midland Draw, input by the user.

**Columns I-K: Return Flow by Source (MG)** – These columns calculate WRF discharge from each source, distributed based on the previous day's ratio of raw water supplies.

**Columns L: Instream Flow Requirement (0.1 cfs) (MG)** – Instream flow requirement at end of reach.

**Column ~~L~~M: Total Available Treated Effluent Return Flow at End of Reach Before Diversion (MG)** – This column calculates the sum daily volume of treated effluent return flows

from all sources at the end of the reach after calculated carriage losses and instream flow requirements that is available for diversion.

**Column MN: Total Diversion at End of Reach (MG)** – This column contains the daily diversion at the end of the reach, input by the user. Conditional formatting indicates if an input value is above the volume available for diversion and is invalid.

**Column NO-PQ: Diversion at End of Reach (MG)** – These columns calculate the diversion volume by source.

**Column QR: Total Available Treated Effluent Return Flow at End of Reach After Diversion (MG)** – This column contains the daily volume of treated return flows from all sources at the end of the reach after diversions, instream flow requirements, and calculated carriage losses.

**Column RS-TU: Treated Effluent Return Flow at End of Reach by Source (MG)** – These columns calculate available treated effluent return flow by source after diversion at the end of the authorized diversion reach after accounting for carriage losses.

## Hal Bailey

---

**From:** Stein, Zachary [REDACTED]  
**Sent:** Wednesday, July 6, 2022 7:25 AM  
**To:** Hal Bailey  
**Cc:** Chris Kozlowski; Carl Craigo  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2  
**Attachments:** LtrResponsRFI\_07062022.pdf; Midland\_P13476\_Accounting\_Plan\_Narrative\_07062022.pdf; Midland\_P13476\_Accounting\_Plan\_07062022.xlsm

Mr. Bailey,

In response to the 6Jun2022 TCEQ Technical RFI, please find the attached documents.

1. Response letter
2. Updated Accounting Plan Narrative
3. Updated Accounting Plan Excel File

Should you have any questions, please do not hesitate to contact me at your convenience.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Sent:** Tuesday, June 14, 2022 10:09 AM  
**To:** Stein, Zachary <[REDACTED]>  
**Cc:** Chris Kozlowski <chris.kozlowski@tceq.texas.gov>  
**Subject:** City of Midland WRPERM 13476 Tech RFI #2

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Zach,

Attached is a Technical Request for Information (RFI) letter for application no. 13476.

Please provide a response by COB on 07/14/2022.

Should you have any questions, or if you need additional time to respond, please let me know.

Thank you,

*Hal E. Bailey, Jr.*  
*Natural Resources Specialist III*

*Water Rights Permitting Team*  
*Water Availability Division*  
*Texas Commission on Environmental Quality*  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)



July 6, 2022

Mr. Hal Bailey, Jr., Project Manager,  
Texas Commission on Environmental Quality  
Water Rights Permitting Team  
Water Rights Permitting & Availability Section, MC 160  
P.O. Box 13087  
Austin, Texas 78711-3087

**RE: Request for Information for Application No. 13476 by the City of Midland**

Dear Mr. Bailey:

This letter provides the response of the City of Midland (City) to your June 14, 2022, request for additional information regarding Application No. 13476 for a water use permit to transport treated effluent return flows using the bed and banks of Midland Draw and is submitted by HDR on behalf of the City. Each item of additional information requested is set out below in bold, followed by the City’s response.

- 1. Explain why all the sources found on page 2 of the Supplemental Information for Application to Use the Bed and Banks of Midland Draw to Convey Treated Effluent are not included in the text file and/or the accounting plan.**

All of the City’s raw water supply sources have been added to page 2 of the existing text file and to the “Instructions & Constants” tab of the accounting plan.

- 2. Modify the accounting plan to incorporate the following instream flow requirements measured at USGS Gage No. 08123850 – Colorado River above Silver, TX:**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Season	Winter		Spring				Summer		Fall		Winter	
Base Flow cfs	2	2	2	2	2	2	1	1	1	1	2	2
Subsistence Flow cfs	1	1	1	1	1	1	1	1	1	1	1	1

Midland Draw is an ephemeral stream and conveys streamflow only during significant rainfall events. The City has not historically discharged treated wastewater effluent into the draw; therefore, no aquatic ecosystem has been established which is dependent upon sustained base or subsistence flows. In the absence of the treated effluent that the City seeks to discharge and convey, TCEQ found the associated tributaries of the Colorado River to be healthy and sound ecological environments. Additionally, TCEQ environmental flow standards at the Colorado River above Silver (USGS Gage 08123850) were developed without the presence of the City’s treated effluent discharges. Therefore, environmental flow standards should not be applied to the City’s future discharge of treated effluent. For these reasons, the City requests that no instream flow requirements be included in the requested authorization or in the accounting plan.

**3. Correct the text document as follows:**

- **Add “Treated Effluent” into the Title of Column F in the SUMMARY TABLE TABS so that it is consistent with the title found in the summary tables.**
- **Correct the Column C description in the ACCOUNTING TAB from “Columns D-H” to “Columns D-G”.**
- **Correct the description of Columns F, G, H, and I in the SUMMARY TABLE TAB. The values referenced are the amounts of return flows at the end of the reach after diversion.**
- **Correct the spelling of “separate” in the fourth paragraph.**

The listed items have been corrected in the 6 July 2022 version of the accounting plan text file attached to this letter.

**4. Correct the worksheets in the accounting plan Excel file as follows:**

- **Provide the formula for Column E in the Summary Table (MG).**
- **Revise the formulas in Columns N, O, P, R, S, and T in the Accounting table to reference data from 2 days prior, rather than one day, for calculations of effluent ratios. Staff notes that there is one day of lag time from the raw water supply input to the effluent discharge, and one additional day of lag time from the effluent discharge to the diversion at the end of the reach.**

The listed items have been corrected in the 6 July 2022 version of the accounting plan Excel file attached to this letter.

Sincerely,



---

Zach Stein, PE

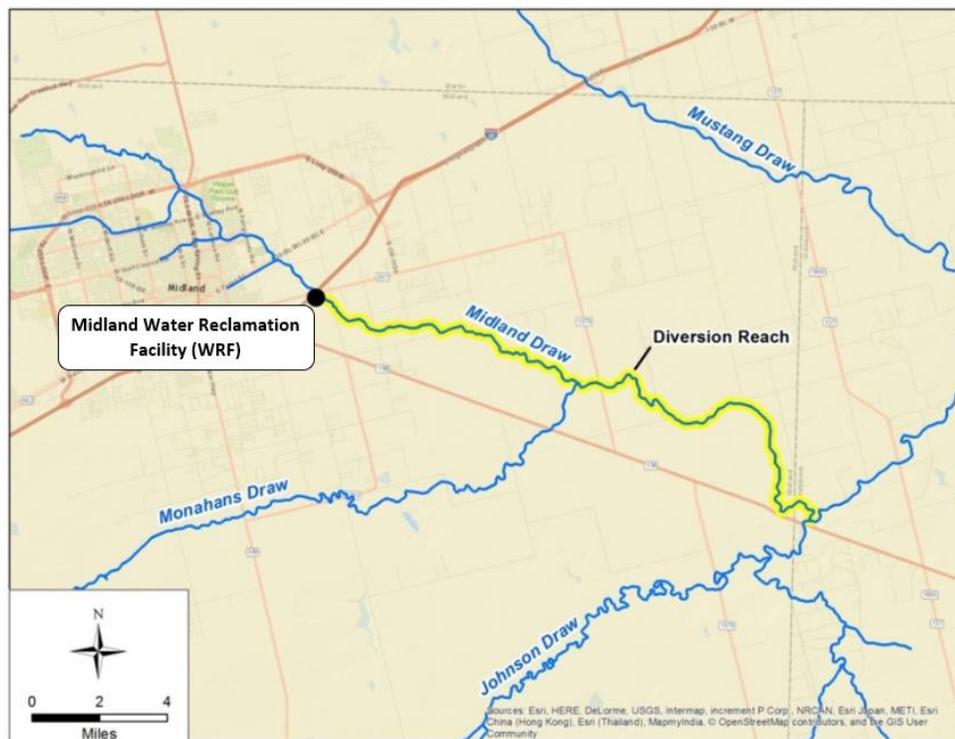
CONSULTANT FOR THE CITY OF MIDLAND

**City of Midland**  
**Indirect Reuse Accounting Plan**  
**Water Use Permit No. 13476**

**Background**

Water Use Permit No. 13476 authorizes the City of Midland (the “City”) to use the bed and banks of Midland Draw to transport the current and future groundwater and surface water based treated effluent return flows discharged from the Midland Water Reclamation Facility (WRF) and subsequently divert and reuse up to 23,500 acre-feet (less losses) per year of these return flows for municipal, mining, and industrial uses in Midland County. The purpose of this accounting plan is to track the daily return flow discharges and diversions for compliance with the terms and conditions of Permit No. 13476.

The authorized 20.1 mile diversion reach of Midland Draw, beginning at the discharge point of the WRF and ending at the confluence with the Johnson Draw, is highlighted yellow in **Figure 1**. Carriage losses from the discharge location to the end of the authorized diversion reach are assumed to be 82% and a travel time of 1-day is assumed for all calculations.



**Figure 1. Map of the diversion reach of the Midland Draw southeast of Midland.**

The treated wastewater return flow originates from surface water and groundwater raw water supply sources. This accounting plan tracks the volume of the groundwater and surface water sourced return flows available for diversion at the beginning and end of the authorized diversion reach.

Source water of the treated effluent consists of the following:

- Groundwater from the City’s T-Bar Ranch/Clearwater, Airport, and Paul Davis Well Fields.
- Surface Water and Groundwater Purchased from the Colorado River Municipal Water District (CRMWD)
  - O.H. Ivie Reservoir (TCEQ Permit 3676)
  - Lake E.V. Spence (CoA 14-1008)
  - Lake J.B. Thomas (CoA 14-1002)
  - Moss Creek Lake (CoA 14-1018)
  - Peyote, Ward County, and Martin County well fields
  - Direct reuse from the raw water production facility in Big Spring, TX

The Accounting Plan tracks the source of the treated wastewater water effluent discharged using the source(s) of the previous day raw water supply. The calculations assume the proportion of the previous day’s raw water supply sources are equal to the proportion of the current day’s treated wastewater effluent by source. Return flows sourced from separate groundwater sources are combined in the return flow accounting. Return flows sourced from surface water are tracked from O.H. Ivie Reservoir and the combined supplies from E.V. Spence, J.B. Thomas, and Moss Creek. These reservoir sources are combined because the CRMWD combines these three supply sources in the meter data provided to the City.

Specific points of diversions are not authorized under Permit No. 13476. Therefore, the accounting plan assumes diversions occur at the end of the authorized diversion reach. When Permit No. 13476 is amended to include specific points of diversion within the authorized diversion reach, the accounting plan will be updated by the City to account for carriage losses to the new point of diversion and calculate available return flow at the new point of diversion.

### ***User Instructions***

The Accounting Plan is to be maintained on a daily basis and stored in the City’s electronic file system. At the beginning of the calendar year, the user will need to make a copy of the previous year accounting plan spreadsheet and delete all input data from the previous year. The user must then enter the current year into cell N11 in the “Instructions & Constants”.

Daily raw water supply and treated effluent discharge data should then be entered in the “Accounting” sheet of the Accounting Plan. The user will need to enter the daily data for December 30th and 31st from the previous year in the “Accounting” sheet to account for the

assumed 1-day lag from raw water delivery to discharge of treated wastewater effluent and the assumed 1-day travel time between the WRF discharge location and the end of the authorized diversion reach. The user should not modify any formulas contained in the Accounting Plan.

## ***Accounting Plan Spreadsheet***

### **Organization of Spreadsheet**

The Accounting Plan spreadsheet contains four separate tabs to organize input data, calculations, and monthly summaries. The following are descriptions of each tab and columns included in the Accounting Plan.

- **Instructions & Constants** – This tab provides background information, user instructions, and constants applied in calculating carriage losses and travel times.
- **Summary Table (ac-ft)** – This tab provides a summary of monthly discharges and diversions in acre-feet.
- **Summary Table (MG)** – This tab provides a summary of monthly discharges and diversions in millions of gallons.
- **Accounting** – This tab contains daily user input and calculations for tracking treated wastewater return flows.

### **INSTRUCTIONS TAB**

**Cell N11: Accounting Year** – Location for the user to input the accounting year. It is imperative that the user input a value because logic pertaining to dates and leap years depends upon this value.

### **SUMMARY TABLE TABS**

**Columns B and C: Month** – This is the month of the year.

**Column D: Total WRF Discharge** – The monthly sum of water discharged from the WRF and returned to Midland Draw.

**Column E: Treated Effluent Return Flow Diversion** – The monthly sum of return flow diversions.

**Column F: Total Treated Effluent Return Flow at End of Reach** – The monthly sum of treated effluent at the end of the reach after carriage losses and diversions.

**Column G: Groundwater Sourced Return Flow at End of Reach** – The monthly sum of return flow from groundwater sources at the end of the reach after carriage losses and diversions.

**Column H: E. V. Spence & J. B. Thomas Reservoirs & Moss Creek Lake Sourced Return Flow Available at End of Reach** – The monthly sum of return flow sourced from State water (surface water) at E. V. Spence and J. B. Thomas reservoirs, and Moss Creek Lake at the end of the reach after carriage losses and diversions.

**Column I: O. H. Ivie Reservoir Sourced Return Flow Available at End of Reach** – The monthly sum of return flow sourced from State water (surface water) at O. H. Ivie Reservoir at the end of the reach after carriage losses and diversions.

## **ACCOUNTING TAB**

**Column A: Date (mm/dd/yyyy)** – This column will automatically be populated with the date once the user enters the accounting year in the Instructions Tab.

**Column B: Month** – This is the numerical month of the year.

**Column C: Total Raw Water Supply (MG)** – This is the sum of daily raw water supplies from Columns D-G.

**Columns D-G: Raw Water Supply by Source (MG)** – These columns contain the daily volume of raw water supply from each source, input by the user.

**Column H: Total Return Flow (MG)** – This column contains the daily volume of treated wastewater return flow discharged into Midland Draw, input by the user.

**Columns I-K: Return Flow by Source (MG)** – These columns calculate WRF discharge from each source, distributed based on the previous day's ratio of raw water supplies.

**Column L: Total Available Return Flow at End of Reach Before Diversion (MG)** – This column calculates the sum daily volume of treated return flows from all sources at the end of the reach after calculated carriage losses that is available for diversion.

**Column M: Total Diversion at End of Reach (MG)** – This column contains the daily diversion at the end of the reach, input by the user. Conditional formatting indicates if an input value is above the volume available for diversion and is invalid.

**Column N-P: Diversion at End of Reach (MG)** – These columns calculate the diversion volume by source.

**Column Q: Total Available Return Flow at End of Reach After Diversion (MG)** – This column contains the daily volume of treated return flows from all sources at the end of the reach after diversions and calculated carriage losses.

**Column R-T: Return Flow at End of Reach by Source (MG)** – These columns calculate available return flow by source after diversion at the end of the authorized diversion reach after accounting for carriage losses.

**City of Midland**

**Water Use Permit No. 13476**

Accounting plan Excel file available upon request

July 6, 2022

Contact Mr. Chris Kozlowski at (512) 239-1801

## Hal Bailey

---

**From:** Stein, Zachary <[REDACTED]>  
**Sent:** Tuesday, June 14, 2022 12:05 PM  
**To:** Hal Bailey  
**Cc:** Chris Kozlowski  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2

Thanks Hal. I will let you know if I have any questions or if additional time is need.

-Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Sent:** Tuesday, June 14, 2022 10:09 AM  
**To:** Stein, Zachary <[REDACTED]>  
**Cc:** Chris Kozlowski <chris.kozlowski@tceq.texas.gov>  
**Subject:** City of Midland WRPERM 13476 Tech RFI #2

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Zach,

Attached is a Technical Request for Information (RFI) letter for application no. 13476.

Please provide a response by COB on 07/14/2022.

Should you have any questions, or if you need additional time to respond, please let me know.

Thank you,

*Hal E. Bailey, Jr.  
Natural Resources Specialist III  
Water Rights Permitting Team  
Water Availability Division  
Texas Commission on Environmental Quality  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)*

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*

June 14, 2022

Mr. Zach Stein  
 HDR, Inc  
 4401 West Gate Blvd., Suite 400  
 Austin, Texas 78745

**VIA E-MAIL**

RE: City of Midland  
 WRPERM 13476  
 CN600246813, RN110118452  
 Application No. 13476 for a Water Use Permit  
 Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
 Midland Draw, Colorado River Basin  
 Midland County

Dear Mr. Stein:

Staff reviewed the accounting plan, (*Indirect Reuse Accounting Plan*), dated October 20, 2021, and determined that the accounting plan will need to be revised, as discussed below, before staff can complete technical review of the application. Note, anytime a change is made within the accounting plan or text, the change should be reflected throughout both documents.

1. Explain why all the sources found on page 2 of the Supplemental Information for Application to Use the Bed and Banks of Midland Draw to Convey Treated Effluent are not included in the text file and/or the accounting plan.
2. Modify the accounting plan to incorporate the following instream flow requirements measured at USGS Gage No. 08123850 - Colorado River above Silver, TX:

	Jan	Feb	Mar	Apr	May	Jun	Ju l	Aug	Sep	Oct	Nov	Dec
Season	Winter		Spring			Summer		Fall		Winter		
Base Flow cfs	2	2	2	2	2	2	1	1	1	1	2	2
Subsistence Flow cfs	1	1	1	1	1	1	1	1	1	1	1	1

3. Correct the text document as follows:
  - Add “Treated Effluent” into the Title of Column F in the SUMMARY TABLE TABS so that it is consistent with the title found in the summary tables.
  - Correct the Column C description in the ACCOUNTING TAB from “Columns D-H” to “Columns D-G”.

- Correct the description of Columns F, G, H, and I in the SUMMARY TABLE TAB. The values referenced are the amounts of return flows at the end of the reach after diversion.
  - Correct the spelling of “separate” in the fourth paragraph.
4. Correct the worksheets in the accounting plan Excel file as follows:
- Provide the formula for Column E in the Summary Table (MG).
  - Revise the formulas in Columns N, O, P, R, S, and T in the Accounting table to reference data from 2 days prior, rather than one day, for calculations of effluent ratios. Staff notes that there is one day of lag time from the raw water supply input to the effluent discharge, and one additional day of lag time from the effluent discharge to the diversion at the end of the reach.

Please provide the requested information by July 14, 2022, or the application may be returned pursuant to 30 TAC § 281.19. Alternatively, you may have the question of the necessity of the requested data (or the sufficiency of the information already submitted) referred to the commission for a decision. To be considered, a request for a referral must be provided by July 14, 2022.

If you have any questions concerning this matter, please contact me via email at [hal.bailey@tceq.texas.gov](mailto:hal.bailey@tceq.texas.gov) or by telephone at (512) 239-4615.

Sincerely,



Hal E. Bailey, Jr., Project Manager  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

## Hal Bailey

---

**From:** Stein, Zachary <[REDACTED]>  
**Sent:** Monday, June 13, 2022 8:42 PM  
**To:** Hal Bailey  
**Cc:** Chris Kozlowski; Carl Craigo  
**Subject:** RE: City of Midland App No. 13476 Request For Information

Good evening Hal,

Will you please provide a status update on the Midland application. In January, you mentioned that the City would be receiving and RFI but I have not received one and wanted to make sure I did not miss it in my inbox.

Also, Cory Moose is no longer with the City. Carl Craigo, who I have copied on this email, will be the new point of contact.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](https://hdrinc.com/follow-us)

---

**From:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Sent:** Wednesday, January 12, 2022 4:26 PM  
**To:** Stein, Zachary <[REDACTED]>  
**Cc:** Cory Moose <[REDACTED]> Chris Kozlowski <chris.kozlowski@tceq.texas.gov>  
**Subject:** RE: City of Midland App No. 13476 Request For Information

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon Zach,

The application is currently in technical review. You will be receiving a technical RFI in response to the accounting plan submitted on 10/20/2021.

Thank you,

*Hal E. Bailey, Jr.*  
*Natural Resources Specialist III*  
*Water Rights Permitting Team*  
*Water Availability Division*  
*Texas Commission on Environmental Quality*  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)

---

**From:** Stein, Zachary <[REDACTED]>  
**Sent:** Wednesday, January 12, 2022 4:15 PM

**To:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Cc:** Cory Moose [REDACTED]  
**Subject:** RE: City of Midland App No. 13476 Request For Information

Good afternoon Hal,

Can you please provide a status update on the City of Midland's application and a target date of when the City can expect a draft permit to review.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Hal Bailey <[Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)>  
**Sent:** Monday, October 25, 2021 9:04 AM  
**To:** Stein, Zachary <[REDACTED]>  
**Cc:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Subject:** FW: City of Midland App No. 13476 Request For Information

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Zach,

Bert is no longer with the Water Rights Permitting Team and several of his applications have been reassigned. I got this one. He forwarded your RFI response to me and I distributed it to the group. If we need any further information, I will reach out to you.

Thank you,

*Hal E. Bailey, Jr.*  
*Natural Resources Specialist III*  
*Water Rights Permitting Team*  
*Water Availability Division*  
*Texas Commission on Environmental Quality*  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)

---

**From:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Sent:** Monday, October 25, 2021 8:10 AM  
**To:** Hal Bailey <[Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)>  
**Subject:** FW: City of Midland App No. 13476 Request For Information

---

**From:** Stein, Zachary <[REDACTED]>  
**Sent:** Monday, October 25, 2021 8:09 AM

**To:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Subject:** RE: City of Midland App No. 13476 Request For Information

Mr. Galvan,

Will you please confirm receipt of RFI response on Wednesday, 20Oct2021. Just wanted to follow up to make sure you got the email since the attachments were large and the email may have exceeded your inbox limit.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Stein, Zachary  
**Sent:** Wednesday, October 20, 2021 9:28 PM  
**To:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Cc:** Cory Moose <[REDACTED]>  
**Subject:** RE: City of Midland App No. 13476 Request For Information

Mr. Galvan,

On behalf of the City of Midland, attached please find the HDR letter and attachments, including the accounting plan, in response to the 26 July 2021 Technical Request for Information. Please let me know if you have any questions about the provided information.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Sent:** Monday, July 26, 2021 12:40 PM  
**To:** Stein, Zachary <[REDACTED]>  
**Subject:** City of Midland App No. 13476 Request For Information

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Stein,

Please see the attached letter for the City of Midland application No. 13476

Best regards,  
Bert Galvan, Work Leader

Water Rights Permitting Team  
Water Rights Permitting and Availability Section  
(512) 239-4013

## Hal Bailey

---

**From:** Stein, Zachary [REDACTED]  
**Sent:** Wednesday, December 7, 2022 3:27 PM  
**To:** Hal Bailey  
**Cc:** Kathy Alexander; Chris Kozlowski; Carl Craig  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2

Thanks Hal.

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](https://hdrinc.com/follow-us)

---

**From:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Sent:** Wednesday, December 7, 2022 3:06 PM  
**To:** Stein, Zachary <[REDACTED]>  
**Cc:** Kathy Alexander <kathy.alexander@tceq.texas.gov>; Chris Kozlowski <chris.kozlowski@tceq.texas.gov>; Carl Craig <[REDACTED]>  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon Zach,

The application is currently in technical review. Feel free to check back with me for future updates.

Thank you,

*Hal E. Bailey, Jr.*  
*Natural Resources Specialist III*  
*Water Rights Permitting Team*  
*Water Availability Division*  
*Texas Commission on Environmental Quality*  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)

---

**From:** Stein, Zachary <[REDACTED]>  
**Sent:** Wednesday, December 7, 2022 1:01 PM  
**To:** Hal Bailey <Hal.Bailey@tceq.texas.gov>  
**Cc:** Kathy Alexander <kathy.alexander@tceq.texas.gov>; Chris Kozlowski <chris.kozlowski@tceq.texas.gov>; Carl Craig <[REDACTED]>  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2

Good afternoon Mr. Bailey,

Will you please provide a status update on the City's permit application at your next convenience.

Thanks.

**ZACH STEIN** P.E.  
M 830.534.2183

hdrinc.com/follow-us

---

**From:** Stein, Zachary  
**Sent:** Friday, September 30, 2022 9:31 AM  
**To:** Hal Bailey <[Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)>  
**Cc:** Kathy Alexander <[kathy.alexander@tceq.texas.gov](mailto:kathy.alexander@tceq.texas.gov)>; Chris Kozlowski <[chris.kozlowski@tceq.texas.gov](mailto:chris.kozlowski@tceq.texas.gov)>; Carl Craig <>  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2

Mr. Bailey,

In response to comments received during the 26Jul2022 meeting with TCEQ staff, attached please find an updated accounting plan and narrative for the City of Midland water right application for Permit 13476. A tracked changes version of the narrative is also attached for your convenience. A summary of substantial changes is as follows:

1. Accounting Plan – Column L of the Accounting tab has been added to include an instream flow requirement of 0.1 cfs at the end of the diversion reach.
2. Narrative – Documentation of methodology used to calculate instream flow requirement at end of proposed diversion reach has been added to the Background section.
3. Narrative – Description of Column L has been added to the User Instructions section.

Please let me know if you have any question or if you require any additional information to continue processing the application.

Thanks.

**ZACH STEIN** P.E.  
M 830.534.2183

hdrinc.com/follow-us

---

**From:** Stein, Zachary  
**Sent:** Wednesday, July 6, 2022 7:25 AM  
**To:** Hal Bailey <[Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)>  
**Cc:** Chris Kozlowski <[chris.kozlowski@tceq.texas.gov](mailto:chris.kozlowski@tceq.texas.gov)>; Carl Craig <>  
**Subject:** RE: City of Midland WRPERM 13476 Tech RFI #2

Mr. Bailey,

In response to the 6Jun2022 TCEQ Technical RFI, please find the attached documents.

1. Response letter
2. Updated Accounting Plan Narrative
3. Updated Accounting Plan Excel File

Should you have any questions, please do not hesitate to contact me at your convenience.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Hal Bailey <[Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)>  
**Sent:** Tuesday, June 14, 2022 10:09 AM  
**To:** Stein, Zachary <[REDACTED]>  
**Cc:** Chris Kozlowski <[chris.kozlowski@tceq.texas.gov](mailto:chris.kozlowski@tceq.texas.gov)>  
**Subject:** City of Midland WRPERM 13476 Tech RFI #2

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning Zach,

Attached is a Technical Request for Information (RFI) letter for application no. 13476.

Please provide a response by COB on 07/14/2022.

Should you have any questions, or if you need additional time to respond, please let me know.

Thank you,

*Hal E. Bailey, Jr.*  
*Natural Resources Specialist III*  
*Water Rights Permitting Team*  
*Water Availability Division*  
*Texas Commission on Environmental Quality*  
512-239-4615 [Hal.Bailey@tceq.texas.gov](mailto:Hal.Bailey@tceq.texas.gov)

## Hal Bailey

---

**From:** Humberto Galvan  
**Sent:** Thursday, October 21, 2021 7:39 AM  
**To:** Hal Bailey  
**Cc:** Chris Kozlowski  
**Subject:** FW: City of Midland App No. 13476 Request For Information  
**Attachments:** Midland\_AppNo13476\_Tech\_RFI\_Response\_10202021.pdf; A. Water Conservation Plan 2021 Final.pdf; B. WCP\_Resolution\_09142021.pdf; C. CITY OF MIDLAND Drought Contingency Plan 2021- Final.pdf; D. DCP Ordinance \_09283021.pdf; E. Midland\_P13476\_Accounting\_Plan\_102021.xlsm; F. Midland\_P13476\_Accounting\_Plan\_Narrative\_102021.docx

---

**From:** Stein, Zachary [REDACTED]  
**Sent:** Wednesday, October 20, 2021 9:28 PM  
**To:** Humberto Galvan <Humberto.Galvan@tceq.texas.gov>  
**Cc:** Cory Moose [REDACTED]  
**Subject:** RE: City of Midland App No. 13476 Request For Information

Mr. Galvan,

On behalf of the City of Midland, attached please find the HDR letter and attachments, including the accounting plan, in response to the 26 July 2021 Technical Request for Information. Please let me know if you have any questions about the provided information.

Thanks,

Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

**From:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Sent:** Monday, July 26, 2021 12:40 PM  
**To:** Stein, Zachary <[REDACTED]>  
**Subject:** City of Midland App No. 13476 Request For Information

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Stein,

Please see the attached letter for the City of Midland application No. 13476

Best regards,

Bert Galvan, Work Leader  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section  
(512) 239-4013



October 20, 2021

Mr. Humberto Galvan, Work Leader  
Texas Commission on Environmental Quality  
Water Rights Permitting Team  
Water Rights Permitting & Availability Section, MC 160  
P.O. Box 13087  
Austin, Texas 78711-3087

**RE: Technical Request for Information for Application No. 13476.**

Dear Mr. Galvan,

This letter provides the response of the City of Midland (the City) to your 26 July 2021 request for additional information regarding Application No. 13476. Each item of additional information requested is set out below in bold, followed by the City's response.

**1. Provide additional information concerning the submitted water conservation plan for municipal use to comply with Title 30 Texas Administrative Code § 288.2.**

- a. Confirm that the method(s) and/or device(s) used to measure and account for the amount of water diverted from the source of supply, described in Section II B. 3. of the water conservation plan is within an accuracy of plus or minus 5.0%. Staff recognizes that this section of the water conservation plan indicates a pump will be used; however, information about the pump's accuracy is not included in this section.**

The City confirms that devices to be used to measure diversions from the source of supply will have an accuracy of within plus or minus 5%.

- b. Provide data or information that supports the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan, evaluates conservation as an alternative to the proposed appropriation, and evaluates any other feasible alternative to new water development.**

The City and its customers are effectively avoiding waste and achieving water conservation through reuse of the City's treated effluent derived from privately owned and contracted groundwater and from State water contracted from the Colorado River Municipal Water District. Authorizations granted under Permit 13476 would reduce demands on existing raw water supply sources, thus conserving these supplies.

2. **Provide a completed Water Conservation Plan for Wholesale Public Water Suppliers (TCEQ Form no. - 20162) as referenced in Worksheet 6.0 Water Conservation/Drought Contingency Plans.**

The City's Water Conservation Plan has been amended for Wholesale Public Water Suppliers and is included as an attachment along with the adopted resolution to amend the plan.

3. **Provide a completed Drought Contingency Plan for Wholesale Public Water Suppliers (TCEQ Form no. - 20193) as referenced in Worksheet 6.0 Water Conservation/Drought Contingency Plans.**

The City's Drought Contingency Plan has been amended for Wholesale Public Water Suppliers and is included as an attachment along with the adopted ordinance to amend the plan.

4. **Provide an accounting plan that demonstrates compliance with the terms and conditions of any permit granted for this application. The plan must include, at minimum, the amount of discharged return flows and the amount of diversion at any point(s) within the diversion reach.**

The accounting plan and supporting narrative are included as attachments.

Sincerely,



Zach Stein, PE  
*Water Resources Engineer*

ATTACHMENTS:

- A. Amended Water Conservation Plan
- B. Resolution Amending the Water Conservation Plan
- C. Amended Drought Contingency Plan
- D. Ordinance Amending the Drought Contingency Plan
- E. Accounting Plan
- F. Accounting Plan Narrative

**WATER CONSERVATION PLAN  
FOR THE  
CITY OF MIDLAND, TEXAS**

**August 2021**

**TABLE OF CONTENTS**

**Contents**

**1. INTRODUCTION AND OBJECTIVES .....4**

**2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES.....5**

    2.1 Conservation Plans.....5

**3. WATER UTILITY PROFILE.....5**

**4. SPECIFICATION OF WATER CONSERVATION GOALS .....5**

    4.1 Five- and Ten-Year Goals.....5

    4.2 Quantification of the Water Conservation Goals.....6

**5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR .....7**

    5.1 Accurate Metering of Raw and Pumped Water .....7

    5.2 Customer Metering Testing, Repair, and Replacement Initiatives .....8

    5.3 Record Management System .....8

    5.4 Determination and Control of Unaccounted Water .....8

    5.5 Leak Detection and Repair.....9

    5.6 Monitoring of Effectiveness and Efficiency .....9

**6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN...9**

**7. WATER RATE STRUCTURE.....10**

**8. OTHER WATER CONSERVATION MEASURES .....10**

    8.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures....10

    8.2 Reservoir System Operation Plan .....11

    8.3 Considerations for Landscape Water Management Regulations .....11

    8.4 Requirement for Water Conservation Plans by Wholesale Customers .....11

    8.5 Coordination with Regional Water Planning Group.....11

**9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN.....11**

    9.1 Schedule of Implementation .....11

**10. WHOLESALE PUBLIC WATER SUPPLIER REQUIREMENTS.....12**

    10.1 Wholesale Customer Utility Profile.....12

    10.2 Monitoring and Record Management Program .....12

    10.3 Metering and Leak Detection and Repair Program .....12

    10.4 Contracts .....12

## **Appendices**

**Appendix A List of References**

**Appendix B TCEQ Rules on Municipal Water Conservation Plans**

**Appendix C Water Utility Profile**

**Appendix D CCN Map**

**Appendix E Water System Description**

**Appendix F Wastewater Treatment Facilities Description**

## **1. INTRODUCTION AND OBJECTIVES**

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation plans for public water suppliers.

The objectives of this water conservation plan are as follows:

- To reduce water consumption from the levels that would prevail without conservation efforts.
- To reduce the loss and waste of water.
- To improve efficiency in the use of water.
- To document the level of recycling and reuse in the water supply.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The water conservation plan presented in this document includes all of the elements required by TCEQ the Plan will be reviewed and updated at least every five years. It includes the following:

- A water utility profile.
- Five- and ten-year goals for per capita water use.
- A schedule for implementing the plan
- A continuous program of leak protection, repair and water loss accounting
- A program of continuing education and information regarding water conservation
- A resolution approving the plan.

## **2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES**

### **2.1 Conservation Plans**

The Texas Commission on Environmental Quality (TCEQ) rules governing the development of water conservation plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 and 288.5 of the Texas Administrative Code, which is included in Appendix B.

## **3. WATER UTILITY PROFILE**

Appendix C to this water conservation plan is a City of Midland water utility profile based on the format recommended by the TCEQ.

## **4. SPECIFICATION OF WATER CONSERVATION GOALS**

The goals for this water conservation plan include the following:

- Strive to attain the per capita municipal water use below the specified amount in gallons per capita per day using a 5-year rolling average calculation.
- Conduct water audits as required by the TCEQ and maintain unaccounted for water to ten (10) percent of the total water used through existing and new maintenance programs.
- Raise public awareness of water conservation and encourage responsible public behavior by public education and information programs.

### **4.1 Five- and Ten-Year Goals**

Water Conservation plans must include quantitative five- and ten-year goals for water savings to include goals for water loss programs and goals for “municipal use in gallons per capita per day”

Water Conservation Plan Goals Table  
 TWDB Form No. J 964  
 Revised 12/14/2012 1:53 PM



**WATER CONSERVATION PLAN  
 5- AND 10-YR GOALS FOR WATER SAVINGS**

Facility Name: \_\_\_\_\_

Water Conservation Plan Year: \_\_\_\_\_

	Historic 5yr Average	Baseline	5-yr Goal for year _____	10-yr Goal for year _____
Total GPCD <sup>1</sup>	152	152	147	142
Residential GPCD <sup>2</sup>	99	99	94	81
Water Loss (GPCD) <sup>3</sup>	10	10	7	6
Water Loss (Percentage) <sup>4</sup>	7 %	7 %	5 %	4 %

1. Total GPCD = (Total Gallons in System - Permanent Population) ÷ 365  
 2. Residential GPCD = (Gallons Used for Residential Use - Residential Population) ÷ 365  
 3. Water Loss GPCD = (Total Water Loss - Permanent Population) ÷ 365  
 4. Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100; or (Water Loss GPCD ÷ Total GPCD) x 100

**4.2 Quantification of the Water Conservation Goals**

Method	Most Likely Savings 5-Year (GPCD)	Most Likely Savings 10-Year (GPCD)
Reduction in unaccounted-for uses	0.3	0.3
Reduction in indoor water use due to water- Conserving plumbing fixtures	0.3	0.3
Reduction in seasonal use	3.5	3.5
Reduction in water use due to public education	1.5	1.5
Total Technical Potential for Reducing per Capita Water Use	5.5	5.5

\* Subtract these totals from the dry-year per capita use to calculate the long-run planning goal.

Planning Goal

The planning goal equals the dry-year per capita water use minus the total technical potentials calculated in number one above.

	5-Year	10-Year
Planning goal (in GPCD)	180.0	175.0
Goal to be achieved by year:	2025	2030

Needed reduction in per capita use to meet planning goal (GPCD)

	5- Year	10-Year
Dry-year per capita use:	186	180
Planning goal (from #2 above):	180	175
Difference between current use and goal:	6	5

(Represents needed reduction in per capita use to meet the goal.)

**5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR**

One of the key elements in water conservation is careful tracking of water use and control of losses through illegal diversions and leaks. Careful metering of water deliveries and water use, detection and repair of leaks in the distribution system and regular monitoring of unaccounted water is important in controlling losses. The City of Midland has meters on all incoming raw water sources and treated water pumping stations, backwash and recycle flows at the treatment facilities. All meters are calibrated according to Texas Administrative Code 290.46 (s) (1).

**5.1 Accurate Metering of Raw and Pumped Water**

Water deliveries to and from the City of Midland are metered by City staff using meters with an accuracy of  $\pm 5\%$ . These meters are calibrated on an annual basis to maintain the required accuracy. If meters are found to be outside of the required parameters they are pulled from service and sent to the manufacturer for servicing and recalibration.

## **5.2 Customer Metering Testing, Repair, and Replacement Initiatives**

A standard universal metering system is used to monitor the quantity of water that is delivered to each residential and commercial customer. Water delivered to public facilities is not an exception. Each public facility has a water meter. Water that is used for public services will need to use a temporary fire hydrant meter when using water from a fire hydrant to account for the total amount of water that is utilized. The water meters are read by the utility's meter readers and recorded on the city's system once per month, with billings made monthly.

The City tests and replaces its customer meters regularly. All customer meters are replaced on an 8-year cycle. In 2018 the City of Midland started replacing older water meters with Automated Metering Infrastructure (AMI) to improve customer service and operational efficiencies, reduce non-revenue water loss and more accurately measure and conserve resources. To date, the City of Midland has replaced 30% or 15,000 of the 50,000 total meters in service. We expect to have 100% replaced by June 2023.

## **5.3 Record Management System**

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record management system will allow for the separation of water sales and uses into residential (single and multi-family), commercial, public/institutional, agricultural, wholesale and industrial categories.

In March 2019 the City of Midland upgraded its record management software to NorthStar which provides us with up to date information meeting the aforementioned rule requirements

## **5.4 Determination and Control of Unaccounted Water**

Unaccounted water is the difference between water delivered to customers and metered deliveries to customers plus authorized but unmetered uses. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, and uses associated with new construction.) Unaccounted water can include several categories:

- Inaccuracies in customer meters. (Customer meters tend to run more slowly as they age and under-report actual use.)
- Accounts that are being used but have not yet been added to the billing system.
- Losses due to water main breaks and leaks in the water distribution system.
- Losses due to illegal connections and theft.

Measures to control unaccounted water are part of the routine operations of water suppliers. Water audits are useful methods of accounting for water usage within a system. Water audits will be conducted by water suppliers to decrease water loss. Maintenance crews and personnel will look for and report evidence of leaks in the water distribution system. Meter readers are asked to watch for and report signs of illegal connections, so they can be addressed quickly. Unaccounted water is calculated as part of the utility profile and is included in Appendix C.

### **5.5 Leak Detection and Repair**

City crews and personnel will look for and report evidence of leaks in the water distribution system. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement as funds are available.

### **5.6 Monitoring of Effectiveness and Efficiency**

An annual conservation report will be completed by May 1 of each year and will be used to monitor the effectiveness and efficiency of the water conservation program and to plan conservation-related activities for the next year. The annual report will record the water use by category, per capita municipal use, and unaccounted water for the current year and compares them to historical values as required by the Texas Water and Administrative Codes.

## **6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN**

The continuing public education and information campaign on water conservation include the following elements:

- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Partnership with Keep Midland Beautiful to educate citizens on conservation efforts and practices.
- Make water conservation brochures and other water conservation materials available to the public.
- The City of Midland's website has information available regarding water conservation and watering schedules available to the public.
- Provide water conservation materials to schools on request and utilize existing age-appropriate education programs available through the TCEQ and TWDB facilitated through Keep Midland Beautiful.

- Support the State-initiated Water Conservation Awareness and Education Campaign.

## 7. WATER RATE STRUCTURE

The current water structure is intended to encourage water conservation and discourage excessive use and waste of water. In 2020 the City of Midland completed a water rate study to determine the best rate to meet the City’s needs while maintaining existing levels of water conservation. The City of Midland proposed water rate structure is as follows:

### Current Water Rates

Residential and Commercial Monthly Base Rate (includes 2,000 gallons)	\$21.61
Apartment Monthly Base Rate Per Unit (includes 2,000 gallons)	\$17.60
Gallons 2,000 and under	Included
Gallons 2,001 to 10,000	\$6.11
Gallons 10,001 to 25,000	\$8.03
Gallons Above 25,000	\$10.80
Residential (or Commercial Lawn Meter) Above 50,000	\$13.50

## 8. OTHER WATER CONSERVATION MEASURES

### 8.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures

The City of Midland currently has adopted the 2018 International Plumbing and will have the 2021 International Plumbing Code (IPC) adopted effective January 1, 2022. The City of Midland Plumbing Code requires a water-conserving fixture which includes requirements for maximum flows of 2.5 gallons per minute (GPM) for faucets, 3.0 for showerheads and 1.6 gallons per flush for toilets. These flow requirements are mandated by nationally recognized standards. In addition, water-using appliances like washing machines and dishwashers meet higher efficiency standards. The potential water reduction from these fixtures and appliances can be significant but historically have been difficult to measure. Also, this code allows the use of gray water systems for flushing of water closets and urinals and subsurface landscape irrigation. The use of gray water has not become prevalent however due to the code recognition of installation it could lead to additional water usage reduction.

## **8.2 Reservoir System Operation Plan**

The City of Midland purchases water from the Colorado River Municipal Water District (CRMWD) and does not have surface water supplies for which to implement a reservoir system operation plan.

## **8.3 Considerations for Landscape Water Management Regulations**

The City of Midland has chosen not to adopt a Landscape Ordinance. The City has made guidance information available to the public.

## **8.4 Requirement for Water Conservation Plans by Wholesale Customers**

The City of Midland has one Wholesale water customer: Midland County Utility District. Refer to section 10 of this plan for Whole water supplier requirements per 30 TAC Section 288.5

## **8.5 Coordination with Regional Water Planning Group**

In accordance with TCEQ regulations, a copy of this adopted water conservation plan will be sent to the Region F Water Planning Group.

# **9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN**

A copy of the resolution adopted by the City Council regarding this water conservation plan is included in Appendix G of this plan. The official responsible for the implementation of the Water Conservation Plan is Carl Craigo, P.E., Director of Utilities.

## **9.1 Schedule of Implementation**

The majority of the City of Midland's Water Conservation initiatives have been implemented before the updating of this plan and are ongoing unless stated previously herein.

## **10. WHOLESALE PUBLIC WATER SUPPLIER REQUIREMENTS**

### **10.1 Wholesale Customer Utility Profile**

Appendix G to this water conservation plan will contain the wholesale Utility Profile in the format recommended by the TCEQ

### **10.2 Monitoring and Record Management Program**

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record management system will allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories.

In March 2019 the City of Midland upgraded its record management software to NorthStar which provides us with up-to-date information meeting the aforementioned rule requirements. Any wholesale customer will be included in this record management system.

### **10.3 Metering and Leak Detection and Repair Program**

Once the City has entered into a contract for the wholesale of water a leak detection and repair program will be generated specific to the city and customer's needs. All customer meters will be Automated Metering Infrastructure (AMI) to improve customer service and operational efficiencies, reduce non-revenue water loss and more accurately measure and conserve resources; meters will be replaced on an 8-year cycle. The program will meet all the requirements of 30 TAC Section 288.5, will carefully track and meter water use, detect and repair leaks and provide regular monitoring of real losses from mains, reported breaks and leaks and storage overflow.

### **10.4 Contracts**

Every contract for the wholesale of water that is entered, renewed, or extended after the adoption of this water conservation plan will include a requirement that the wholesale customer develops and implements a water conservation plan meeting the requirements of Title 30, Chapter 288, of the Texas Administrative Code. This requirement extends to each successive wholesale customer in the resale of the water.

**Appendix A**  
**List of References**

**Appendix A**  
**List of References**

- (1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.2, and Subchapter B, Rule 288.20, downloaded from <http://texreg.sos.state.tx.us/public/>.

The following conservation plans and related documents were reviewed in the development of this plan.

- (2) Texas Commission on Environmental Quality Water Conservation Planning downloaded from [https://www.tceq.texas.gov/permitting/water\\_rights/wr\\_technical-resources/conserv.html](https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/conserv.html).
- (3) Texas Water Development Board: Report 362, “Water Conservation Best Management Practices”. <http://www.twdb.texas.gov/conservation/BMPs/index.asp>.

**Appendix B**  
**Texas Commission on Environmental Quality Rules on Municipal Water  
Conservation Plans**

**APPENDIX B**

**Texas Administrative Code**

**TITLE 30**

**PART 1**

**CHAPTER 288**

**SUBCHAPTER A**

**RULE §288.2**

ENVIRONMENTAL QUALITY

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

WATER CONSERVATION PLANS, DROUGHT

CONTINGENCY PLANS, GUIDELINES AND

REQUIREMENTS

WATER CONSERVATION PLANS

**Water Conservation Plans for Municipal Uses by Public**

**Water Suppliers**

---

(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

(i) residential;

(I) single family;

(II) multi-family;

(ii) commercial;

- (iii) institutional;
- (iv) industrial;
- (v) agricultural; and,
- (vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) 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 in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), 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 in this chapter. If the customer intends to resell the water, 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 the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(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) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

- (D) reuse and/or recycling of wastewater and/or graywater;
  - (E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;
  - (F) a program and/or ordinance(s) for landscape water management;
  - (G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and
  - (H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.
- (b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.
- (c) A public water supplier for municipal use 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. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

**Appendix C**  
**Water Utility Profile**

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### CONTACT INFORMATION

Name of Utility: City of Midland Water Purification Plant

Public Water Supply Identification Number (PWS ID): TX1650001

Certificate of Convenience and Necessity (CCN) Number: 10221

Surface Water Right ID Number:

Wastewater ID Number: 20083

Contact: First Name: Cory Last Name: Moose  
Title:

Address: 300 N. Loraine City: Midland State: TX  
Zip Code: 79701 Zip+4:  Email:

Telephone Number: 4326857937 Date: 6/23/2020

Is this person the designated Conservation Coordinator?  Yes  No

Regional Water Planning Group: F

Groundwater Conservation District:

Our records indicate that you:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

#### A. Population and Service Area Data

1. Current service area size in square miles:

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. Historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Water Service
2019	142,344	0	142,344
2018	136,089	0	136,089
2017	134,610	0	134,610
2016	128,037	0	128,037
2015	128,037	0	128,037

3. Projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Water Service
2020	146,187	0	146,187
2030	164,437	0	164,437
2040	184,169	0	184,169
2050	206,269	0	206,269
2060	225,000	0	225,000

4. Described source(s)/method(s) for estimating current and projected populations.

US Multi-Regional Econometric Model, The Perryman Group. See brochure with condensed information.
---

Attached file(s):

File Name	File Description
perryman-priority-midland-by-the-numbers-08-2019.pdf	

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### B. System Input

System input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Water Produced in Gallons	Purchased/Imported Water in Gallons	Exported Water In Gallons	Total System Input	Total GPCD
2019	5,465,223,333	2,777,210,526	0	8,242,433,859	159
2018	4,569,634,409	3,097,231,579	0	7,666,865,988	154
2017	4,735,620,408	2,382,693,878	0	7,118,314,286	145
2016	4,960,660,204	2,056,773,469	0	7,017,433,673	150
2015	5,013,644,898	1,976,204,082	0	6,989,848,980	150
Historic Average	4,948,956,650	2,458,022,707	0	7,406,979,357	152

### C. Water Supply System

Attached file(s):

File Name	File Description
Midland Water Distribution System Analysis Report_Final_with Appendix.pdf	

1. Designed daily capacity of system in gallons
2. Storage Capacity
  - 2a. Elevated storage in gallons:
  - 2b. Ground storage in gallons:

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### D. Projected Demands

1. The estimated water supply requirements for the next ten years using population trends, historical water use, economic growth, etc

Year	Population	Water Demand (gallons)
2021	147,326	5,377,399,000
2022	151,488	5,529,312,000
2023	154,818	5,650,857,000
2024	155,341	5,669,946,500
2025	157,057	5,732,580,500
2026	158,974	5,802,551,000
2027	159,098	5,807,077,000
2028	160,436	5,855,914,000
2029	161,359	5,889,603,500
2030	164,437	6,038,450,500

2. Description of source data and how projected water demands were determined.

The Perryman report attached previously  
 Population \* 100 GPCPD historic use \* 365

### E. High Volume Customers

1. The annual water use for the five highest volume **RETAIL** customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
City of Midland	Commercial	134,741,000	Treated
MISD	Commercial	84,450,000	Treated
Midland Memorial Hospital	Commercial	42,144,000	Treated
Midland College	Commercial	28,381,000	Treated
Midland Park at Caldera	Commercial	22,637,000	Treated

2. The annual water use for the five highest volume **WHOLESALE** customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
----------	--------------------	------------------	----------------

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### F. Utility Data Comment Section

Additional comments about utility data.

### Section II: System Data

#### A. Retail Water Supplier Connections

1. List of active retail connections by major water use category.

Water Use Category Type	Total Retail Connections (Active + Inactive)	Percent of Total Connections
Residential - Single Family	44,711	89.18 %
Residential - Multi-Family	382	0.76 %
Industrial	1	0.00 %
Commercial	4,081	8.14 %
Institutional	959	1.91 %
Agricultural	0	0.00 %
<b>Total</b>	<b>50,134</b>	<b>100.00 %</b>

2. Net number of new retail connections by water use category for the previous five years.

Net Number of New Retail Connections							
Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
<b>2019</b>	6,344			510	2		6,856
<b>2018</b>	4,028			635	3		4,666
<b>2017</b>	4,576			657	1		5,234
<b>2016</b>	3,110			382	0		3,492
<b>2015</b>	1,252			262	0		1,514

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### B. Accounting Data

The previous five years' gallons of RETAIL water provided in each major water use category.

Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2019	4,318,164,000	852,720,000	469,543,000	1,600,332,000	323,832,000	0	7,564,591,000
2018	4,042,726,000	805,572,000	337,982,000	1,493,896,000	515,396,000	0	7,195,572,000
2017	4,123,932,000	723,924,000	0	1,404,468,000	319,248,000	0	6,571,572,000
2016	4,140,936,000	635,280,000	0	1,423,992,000	383,916,000	0	6,584,124,000
2015	3,918,408,000	634,104,000	0	1,336,128,000	330,732,000	0	6,219,372,000

### C. Residential Water Use

The previous five years residential GPCD for single family and multi-family units.

Year	Total Residential GPCD
2019	100
2018	98
2017	99
2016	102
2015	97
Historic Average	99

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### D. Annual and Seasonal Water Use

1. The previous five years' gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Water				
	2019	2018	2017	2016	2015
January	348,570,000	345,117,000	378,273,000	345,117,000	348,570,000
February	292,950,000	356,223,000	333,012,000	356,223,000	292,950,000
March	352,478,000	405,413,000	451,328,000	405,413,000	352,478,000
April	432,380,000	414,340,000	431,168,000	414,340,000	432,380,000
May	346,465,000	492,457,000	592,877,000	492,457,000	346,465,000
June	522,639,000	541,482,000	603,899,000	541,482,000	522,639,000
July	528,697,000	565,802,000	573,972,000	565,802,000	528,697,000
August	549,804,000	643,879,000	615,413,000	643,879,000	549,804,000
September	564,267,000	508,584,000	545,955,000	508,584,000	564,267,000
October	463,037,000	486,946,000	511,048,000	486,964,000	463,037,000
November	323,312,000	430,778,000	445,085,000	430,778,000	323,312,000
December	392,138,000	406,349,000	399,360,000	406,349,000	392,138,000
<b>Total</b>	<b>5,116,737,000</b>	<b>5,597,370,000</b>	<b>5,881,390,000</b>	<b>5,597,388,000</b>	<b>5,116,737,000</b>

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

2. The previous five years' gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Water				
	2019	2018	2017	2016	2015
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
<b>Total</b>					

3. Summary of seasonal and annual water use.

	Summer RETAIL (Treated + Raw)	Total RETAIL (Treated + Raw)
<b>2019</b>	1,601,140,000	5,116,737,000
<b>2018</b>	1,751,163,000	5,597,370,000
<b>2017</b>	1,793,284,000	5,881,390,000
<b>2016</b>	1,751,163,000	5,597,388,000
<b>2015</b>	1,601,140,000	5,116,737,000
<b>Average in Gallons</b>	1,699,578,000.00	5,461,924,400.00

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### E. Water Loss

Water Loss data for the previous five years.

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2019	574,812,436	11	6.97 %
2018	375,458,163	8	4.90 %
2017	457,763,357	9	6.43 %
2016	345,591,752	7	4.92 %
2015	683,103,867	15	9.77 %
<b>Average</b>	487,345,915	10	6.60 %

### F. Peak Day Use

Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2019	14,018,457	17403695	1.2415
2018	15,335,260	19034380	1.2412
2017	16,113,397	19492217	1.2097
2016	15,335,309	19034380	1.2412
2015	14,018,457	17403695	1.2415

### G. Summary of Historic Water Use

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	4,108,833,200	89.18 %	60.18 %
Residential - Multi-Family	730,320,000	0.76 %	10.70 %
Industrial	161,505,000	0.00 %	2.37 %
Commercial	1,451,763,200	8.14 %	21.26 %
Institutional	374,624,800	1.91 %	5.49 %
Agricultural	0	0.00 %	0.00 %

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### H. System Data Comment Section

### Section III: Wastewater System Data

#### A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s) in gallons per day: 21,000,000

2. List of active wastewater connections by major water use category.

Water Use Category	Metered	Unmetered	Total Connections	Percent of Total Connections
<b>Municipal</b>	44,711		44,711	89.96 %
<b>Industrial</b>	1		1	0.00 %
<b>Commercial</b>	4,031		4,031	8.11 %
<b>Institutional</b>	959		959	1.93 %
<b>Agricultural</b>	0		0	0.00 %
<b>Total</b>	49,702		49,702	100.00 %

3. Percentage of water serviced by the wastewater system: 98.00 %

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

4. Number of gallons of wastewater that was treated by the utility for the previous five years.

Month	Total Gallons of Treated Water				
	2019	2018	2017	2016	2015
January	301,230,000	317,080,000	281,240,000	291,590,000	273,278,000
February	274,710,000	267,670,000	248,540,000	263,130,000	251,080,000
March	302,800,000	304,990,000	279,130,000	284,380,000	280,034,000
April	317,840,000	298,040,000	270,880,000	281,780,000	253,110,000
May	352,840,000	311,490,000	282,500,000	290,290,000	253,031,000
June	326,800,000	317,110,000	295,220,000	279,820,000	259,116,000
July	332,020,000	308,650,000	296,560,000	285,790,000	281,464,000
August	324,070,000	315,760,000	312,090,000	294,110,000	300,354,000
September	311,300,000	307,820,000	297,520,000	289,410,000	275,584,000
October	305,900,000	305,440,000	314,580,000	286,820,000	278,516,000
November	286,450,000	288,570,000	297,140,000	279,490,000	271,464,000
December	284,100,000	298,700,000	300,150,000	294,350,000	274,140,000
<b>Total</b>	<b>3,720,060,000</b>	<b>3,641,320,000</b>	<b>3,475,550,000</b>	<b>3,420,960,000</b>	<b>3,251,171,000</b>

5. Could treated wastewater be substituted for potable water?

Yes
  No

### B. Reuse Data

1. Data by type of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site Irrigation	3,425,000
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (park,golf courses)	0
Agricultural	3,777,074,000
Discharge to surface water	
Evaporation Pond	
Other	
<b>Total</b>	<b>3,780,499,000</b>

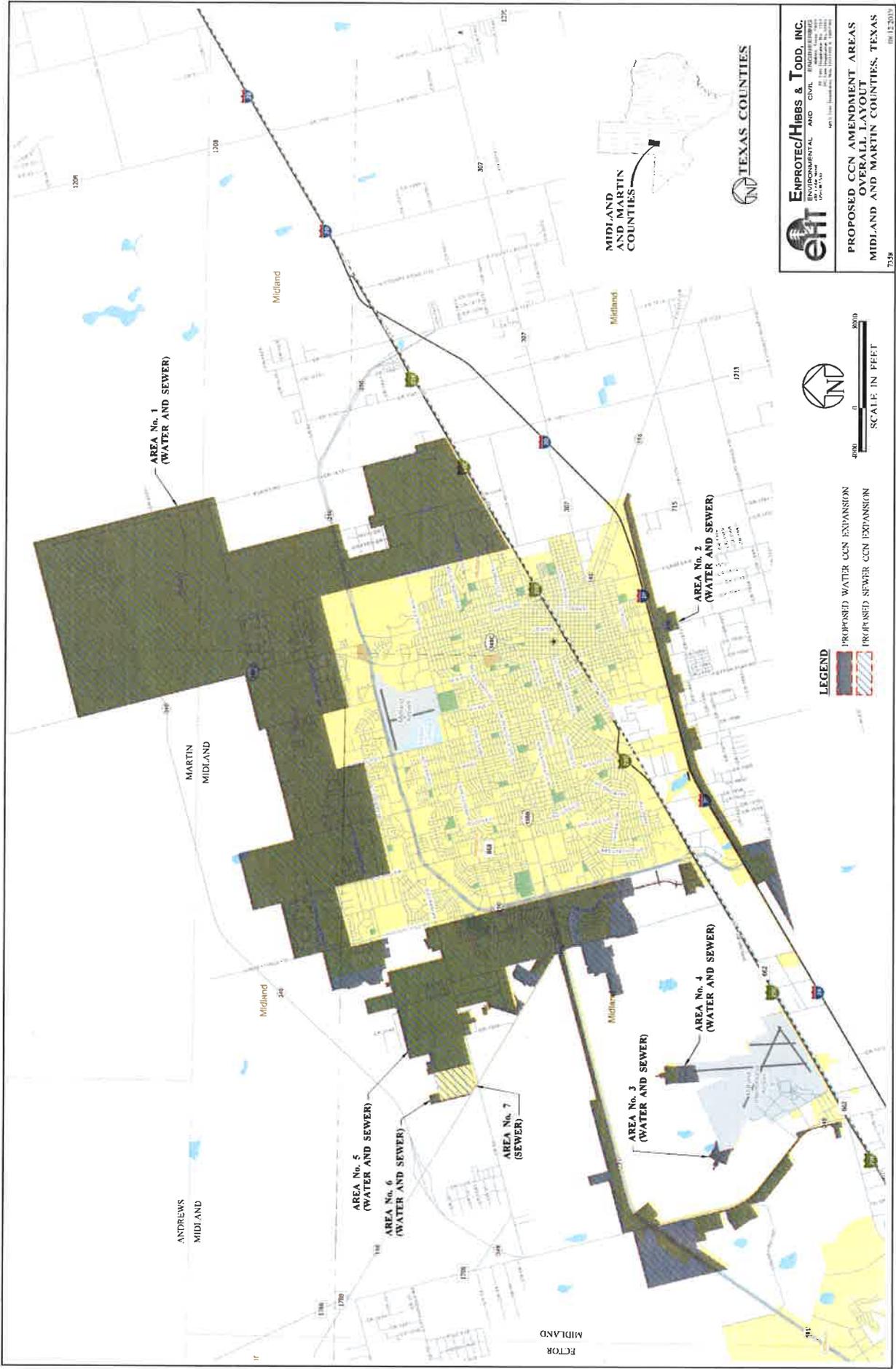
## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### C. Wastewater System Data Comment

Additional comments and files to support or explain wastewater system data listed below.

--

**Appendix D**  
**CCN and MAP**



**ENPROTEC/HIBBS & TODD, INC.**  
 ENVIRONMENTAL AND CIVIL ENGINEERS  
 2000 W. 11th Street, Suite 100  
 Midland, Texas 79701  
 P.O. Box 1000  
 Midland, Texas 79701  
 With Us You Get The Best of Both Worlds

**PROPOSED CCN AMENDMENT AREAS  
 OVERALL LAYOUT  
 MIDLAND AND MARTIN COUNTIES, TEXAS**

08/12/2015  
 7536



**LEGEND**

PROPOSED WATER CCN EXPANSION

PROPOSED SEWER CCN EXPANSION

MIDLAND  
 AND MARTIN  
 COUNTIES

AREA No. 1  
 (WATER AND SEWER)

AREA No. 2  
 (WATER AND SEWER)

AREA No. 3  
 (WATER AND SEWER)

AREA No. 4  
 (WATER AND SEWER)

AREA No. 5  
 (WATER AND SEWER)

AREA No. 6  
 (WATER AND SEWER)

AREA No. 7  
 (SEWER)

MARTIN  
 MIDLAND

ANDREWS  
 MIDLAND

MIDLAND

Midland

Midland

Midland

Midland

**Appendix E**  
**Water System Description**

## Appendix E

### CITY OF MIDLAND WATER SYSTEM

The City of Midland water system is supplied by both surface and groundwater surfaces. Approximately 60% of the current annual demand based on the previous 12 months is provided by The Colorado River Municipal Water District (CRMWD) through two (2) basic contracts. Water is supplied from primarily surface water supplies – lakes J.B. Thomas, J.V. Spence, and O.H. Ivie. Current contract volumes specify 15,001.78 AF from Lake Ivie and 17,797 AF from Lakes Thomas/Spence for the current year. Contractual amounts increase slightly each year through 2029 for the Thomas/Spence source at which time the average daily contractual flow is 17.97 MGD before the current contract ends. All water is treated at the Midland Water Purification Plant. The treatment plant is designed for 32 MGD.

The balance of water supplies the City owns or is contracted for is supplied by two groundwater systems. The Paul Davis Well Field is directly owned and operated by the City of Midland and can produce a maximum daily flow of approximately 16 MGD from 31 wells pulling from the Ogallala Aquifer. Water from the well field is pumped from approximately 25 miles north of Midland to a point in the Water Treatment Plant between final-filtered water and clear well storage to blend out elevated arsenic, selenium, and fluoride content in the groundwater. The T-Bar and Clearwater well fields are operated by the Midland County Fresh Water Supply District #1 who delivers water to the City of Midland via a contract arrangement for a peak delivery of 10 MGD. These 2 groundwater sources make up the remaining approximately 40% of the City of Midland's total current use.

Surface water plus the blended Paul Davis well water is pumped into the distribution system by a single high service pump station into each of two (2) separate pressure planes. Groundwater from the T-Bar/Clearwater Ranch sources is delivered to the City in a single line to a delivery point at which further disinfection is applied and the treated water is delivered into the western portion of the City of Midland's distribution system. System Ground Storage totals 19 MG which includes WPP clear well storage (12 MG), and distribution system storage (7 MG) \*. Five (5) Elevated storage tanks provide a total of 11 MG of elevated storage in the distribution system \*\*. The distribution network consists of greater than 600 miles of pipeline in 3 separate pressure planes. In 2022 a new 2 million gallon storage tank will come online providing additional capacity and pressure.

\*Note: Includes the bottom 21.5 ft. of 10 MG storage or approximately 6.61 MG of the Edgewood GST

\*\* Note: Includes the top 11ft. of 10 MG storage or approximately 3.38 MG of the Edgewood GST

**Appendix F**  
**Wastewater Treatment Facilities Description**

## Appendix F

### CITY OF MIDLAND WASTEWATER SYSTEM

. The City of Midland owns and operates the Midland Water Reclamation Facility (WRF) under TPDES permit No. WQ0010223-001. Wastewater is collected by approximately 700 miles of sanitary sewer collection lines. Wastewater treatment consists of preliminary, primary processes and an activated sludge process with partial flow capacity to produce up to 15 MGD of Type II reuse water.

Preliminary and primary treatment consists of:

- a bar screen
- rotating drum screens
- grit chambers
- classifiers
- primary clarifiers.

Secondary and tertiary treatment consists of:

- Biological reactor basins
- Turbo blowers
- Mixers for anoxic, oxic and swing zones
- Secondary clarifiers
- RAS/WAS pump station
- Cloth disk filtration
- UV Disinfection

The solids are anaerobically digested and either landfilled or land applied on the land application site.

Solids Handling Consist of:

- Aerated Sludge Holding
- Two anaerobic digesters and gas storage
- Sludge pumping facilities primary and secondary
- Screw Presses

In 2014 the City of Midland and Pioneer Natural Resources (PXD) are entered into an agreement for PXD to provide upgrades to the Midland WRF in return for the rights to use its treated effluent. 100% of the effluent from the WRF will be reused by PXD, discharged into the Midland Draw, or used for agricultural purposes. The City of Midland currently provides 98% of the effluent from the WRF to PXD.

**RESOLUTION NO. 2021-120**

**RESOLUTION AMENDING THE WATER  
CONSERVATION PLAN FOR THE CITY OF MIDLAND,  
TEXAS**

**WHEREAS**, the City, by resolution No. 2020-123, adopted the current Water Conservation Plan on July 14, 2020; and

**WHEREAS**, The Texas Commission on Environmental Quality ("TCEQ") requires the Water Conservation Plan to address possible wholesale water contracts; and

**WHEREAS**, the City Council finds it to be in the public interest for the City to amend the Water Conservation Plan for the City of Midland, Texas, so as to comply with TCEQ's requirements;

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:**

**THAT** the Water Conservation Plan for the City of Midland, Texas, is hereby amended, said plan being on file in the City Secretary's office referenced by the date and number of this resolution.

On motion of Council member Blong, seconded by Council member Ladd, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the 14th day of September, A.D., 2021, by the following vote:

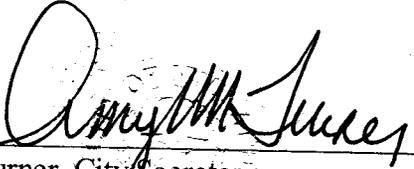
Council members voting "AYE": Blong, Trost, Robnett, Payton, Dufford, Ladd

Council members voting "NAY": None



Patrick N. Payton, Mayor

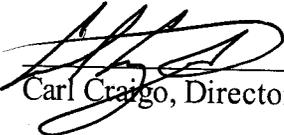
ATTEST:

  
\_\_\_\_\_  
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

  
\_\_\_\_\_  
Robert Patrick, City Manager

APPROVED AS TO CONTENT  
AND COMPLETENESS:

  
\_\_\_\_\_  
Carl Craig, Director of Utilities

APPROVED ONLY AS TO FORM:

  
\_\_\_\_\_  
John Ohnemiller, City Attorney



## City Council Meeting

**Item Number:** 26  
**Meeting Date:** September 14, 2021  
**To:** City Council / City Manager  
**From:** Carl Craigo, Director  
**Subject:** RESOLUTION AMENDING THE WATER CONSERVATION PLAN FOR THE CITY OF MIDLAND, TEXAS (DISTRICT: ALL) (UTILITIES)

---

**Purpose:**

Resolution amending the current water conservation plan for the City of Midland.

**Recommended City Council Action:**

Approve

**Fiscal Impact:**

NA

**Discussion:**

The City's current conservation plan was adopted July 14, 2020 which was the 5 year update of the August 25, 2015 plan as required by the Texas Water Code. This update is requested based of of the requirement by the TCEQ to address possible wholesale water contracts to be able to obtain the City's bed and banks permit for the discharge of water from the Water Reclamation Facility.

A handwritten signature in black ink, appearing to read "Robert F. Patel". The signature is written in a cursive style.

---

City Manager's Office

**WATER CONSERVATION PLAN  
FOR THE  
CITY OF MIDLAND, TEXAS**

**August 2021**

PACKET

26.4

September 14, 2021

**TABLE OF CONTENTS**

**Contents**

**1. INTRODUCTION AND OBJECTIVES .....4**

**2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES.....5**

    2.1 Conservation Plans.....5

**3. WATER UTILITY PROFILE.....5**

**4. SPECIFICATION OF WATER CONSERVATION GOALS .....5**

    4.1 Five- and Ten-Year Goals.....5

    4.2 Quantification of the Water Conservation Goals.....6

**5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR .....7**

    5.1 Accurate Metering of Raw and Pumped Water .....7

    5.2 Customer Metering Testing, Repair, and Replacement Initiatives .....8

    5.3 Record Management System .....8

    5.4 Determination and Control of Unaccounted Water .....8

    5.5 Leak Detection and Repair.....9

    5.6 Monitoring of Effectiveness and Efficiency .....9

**6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN...9**

**7. WATER RATE STRUCTURE.....10**

**8. OTHER WATER CONSERVATION MEASURES .....10**

    8.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures....10

    8.2 Reservoir System Operation Plan .....11

    8.3 Considerations for Landscape Water Management Regulations .....11

    8.4 Requirement for Water Conservation Plans by Wholesale Customers .....11

    8.5 Coordination with Regional Water Planning Group.....11

**9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN .....11**

    9.1 Schedule of Implementation .....11

**10. WHOLESALE PUBLIC WATER SUPPLIER REQUIREMENTS.....12**

    10.1 Wholesale Customer Utility Profile.....12

    10.2 Monitoring and Record Management Program .....12

    10.3 Metering and Leak Detection and Repair Program .....12

    10.4 Contracts .....12

**Appendices**

**Appendix A List of References**

**Appendix B TCEQ Rules on Municipal Water Conservation Plans**

**Appendix C Water Utility Profile**

**Appendix D CCN Map**

**Appendix E Water System Description**

**Appendix F Wastewater Treatment Facilities Description**

## 1. INTRODUCTION AND OBJECTIVES

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation plans for public water suppliers.

The objectives of this water conservation plan are as follows:

- To reduce water consumption from the levels that would prevail without conservation efforts.
- To reduce the loss and waste of water.
- To improve efficiency in the use of water.
- To document the level of recycling and reuse in the water supply.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The water conservation plan presented in this document includes all of the elements required by TCEQ the Plan will be reviewed and updated at least every five years. It includes the following:

- A water utility profile.
- Five- and ten-year goals for per capita water use.
- A schedule for implementing the plan
- A continuous program of leak protection, repair and water loss accounting
- A program of continuing education and information regarding water conservation
- A resolution approving the plan.

**2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES**

**2.1 Conservation Plans**

The Texas Commission on Environmental Quality (TCEQ) rules governing the development of water conservation plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 and 288.5 of the Texas Administrative Code, which is included in Appendix B.

**3. WATER UTILITY PROFILE**

Appendix C to this water conservation plan is a City of Midland water utility profile based on the format recommended by the TCEQ.

**4. SPECIFICATION OF WATER CONSERVATION GOALS**

The goals for this water conservation plan include the following:

- Strive to attain the per capita municipal water use below the specified amount in gallons per capita per day using a 5-year rolling average calculation.
- Conduct water audits as required by the TCEQ and maintain unaccounted for water to ten (10) percent of the total water used through existing and new maintenance programs.
- Raise public awareness of water conservation and encourage responsible public behavior by public education and information programs.

**4.1 Five- and Ten-Year Goals**

Water Conservation plans must include quantitative five- and ten-year goals for water savings to include goals for water loss programs and goals for “municipal use in gallons per capita per day”

Water Conservation Plan - Water Audit  
 TSS&S Plan No. 1754  
 Revision 12/14/2012 1:00 PM

City of  
 Development Dept

**WATER CONSERVATION PLAN  
 5- AND 10-YR GOALS FOR WATER SAVINGS**

Facility Name: \_\_\_\_\_

Water Conservation Plan Year: \_\_\_\_\_

	Historic 5yr Average	Baseline	5-yr Goal for year _____	10-yr Goal for year _____
Total GPCD <sup>1</sup>	152	152	147	142
Residential GPCD <sup>2</sup>	99	99	94	81
Water Loss (GPCD) <sup>3</sup>	10	10	7	6
Water Loss (Percentage) <sup>4</sup>	7%	7%	5%	4%

1. Total GPCD = (Total Gallons in System ÷ Permanent Population) ÷ 365  
 2. Residential GPCD = (Gallons Used for Residential Use ÷ Residential Population) ÷ 365  
 3. Water Loss GPCD = (Total Water Loss ÷ Permanent Population) ÷ 365  
 4. Water Loss Percentage = (Total Water Loss ÷ Total Gallons in System) x 100 or (Water Loss GPCD ÷ Total GPCD) x 100

**4.2 Quantification of the Water Conservation Goals**

Method	Most Likely Savings 5-Year (GPCD)	Most Likely Savings 10-Year (GPCD)
Reduction in unaccounted-for uses	0.3	0.3
Reduction in indoor water use due to water-conserving plumbing fixtures	0.3	0.3
Reduction in seasonal use	3.5	3.5
Reduction in water use due to public education	1.5	1.5
<b>Total Technical Potential for Reducing per Capita Water Use</b>	<b>5.5</b>	<b>5.5</b>

\* Subtract these totals from the dry-year per capita use to calculate the long-run planning goal.

**Planning Goal**

The planning goal equals the dry-year per capita water use minus the total technical potentials calculated in number one above.

	5-Year	10-Year
Planning goal (in GPCD)	180.0	175.0
Goal to be achieved by year:	2025	2030

**Needed reduction in per capita use to meet planning goal (GPCD)**

	5- Year	10-Year
Dry-year per capita use:	186	180
Planning goal (from #2 above):	180	175
Difference between current use and goal:	6	5

(Represents needed reduction in per capita use to meet the goal.)

**5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR**

One of the key elements in water conservation is careful tracking of water use and control of losses through illegal diversions and leaks. Careful metering of water deliveries and water use, detection and repair of leaks in the distribution system and regular monitoring of unaccounted water is important in controlling losses. The City of Midland has meters on all incoming raw water sources and treated water pumping stations, backwash and recycle flows at the treatment facilities. All meters are calibrated according to Texas Administrative Code 290.46 (s) (1).

**5.1 Accurate Metering of Raw and Pumped Water**

Water deliveries to and from the City of Midland are metered by City staff using meters with an accuracy of  $\pm 5\%$ . These meters are calibrated on an annual basis to maintain the required accuracy. If meters are found to be outside of the required parameters they are pulled from service and sent to the manufacturer for servicing and recalibration.

## **5.2 Customer Metering Testing, Repair, and Replacement Initiatives**

A standard universal metering system is used to monitor the quantity of water that is delivered to each residential and commercial customer. Water delivered to public facilities is not an exception. Each public facility has a water meter. Water that is used for public services will need to use a temporary fire hydrant meter when using water from a fire hydrant to account for the total amount of water that is utilized. The water meters are read by the utility's meter readers and recorded on the city's system once per month, with billings made monthly.

The City tests and replaces its customer meters regularly. All customer meters are replaced on an 8-year cycle. In 2018 the City of Midland started replacing older water meters with Automated Metering Infrastructure (AMI) to improve customer service and operational efficiencies, reduce non-revenue water loss and more accurately measure and conserve resources. To date, the City of Midland has replaced 30% or 15,000 of the 50,000 total meters in service. We expect to have 100% replaced by June 2023.

## **5.3 Record Management System**

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record management system will allow for the separation of water sales and uses into residential (single and multi-family), commercial, public/institutional, agricultural, wholesale and industrial categories.

In March 2019 the City of Midland upgraded its record management software to NorthStar which provides us with up to date information meeting the aforementioned rule requirements

## **5.4 Determination and Control of Unaccounted Water**

Unaccounted water is the difference between water delivered to customers and metered deliveries to customers plus authorized but unmetered uses. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, and uses associated with new construction.) Unaccounted water can include several categories:

- Inaccuracies in customer meters. (Customer meters tend to run more slowly as they age and under-report actual use.)
- Accounts that are being used but have not yet been added to the billing system.
- Losses due to water main breaks and leaks in the water distribution system.
- Losses due to illegal connections and theft.

Measures to control unaccounted water are part of the routine operations of water suppliers. Water audits are useful methods of accounting for water usage within a system. Water audits will be conducted by water suppliers to decrease water loss. Maintenance crews and personnel will look for and report evidence of leaks in the water distribution system. Meter readers are asked to watch for and report signs of illegal connections, so they can be addressed quickly. Unaccounted water is calculated as part of the utility profile and is included in Appendix C.

### **5.5 Leak Detection and Repair**

City crews and personnel will look for and report evidence of leaks in the water distribution system. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement as funds are available.

### **5.6 Monitoring of Effectiveness and Efficiency**

An annual conservation report will be completed by May 1 of each year and will be used to monitor the effectiveness and efficiency of the water conservation program and to plan conservation-related activities for the next year. The annual report will record the water use by category, per capita municipal use, and unaccounted water for the current year and compares them to historical values as required by the Texas Water and Administrative Codes.

## **6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN**

The continuing public education and information campaign on water conservation include the following elements:

- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Partnership with Keep Midland Beautiful to educate citizens on conservation efforts and practices.
- Make water conservation brochures and other water conservation materials available to the public.
- The City of Midland's website has information available regarding water conservation and watering schedules available to the public.
- Provide water conservation materials to schools on request and utilize existing age-appropriate education programs available through the TCEQ and TWDB facilitated through Keep Midland Beautiful.

- Support the State-initiated Water Conservation Awareness and Education Campaign.

**7. WATER RATE STRUCTURE**

The current water structure is intended to encourage water conservation and discourage excessive use and waste of water. In 2020 the City of Midland completed a water rate study to determine the best rate to meet the City’s needs while maintaining existing levels of water conservation. The City of Midland proposed water rate structure is as follows:

**Current Water Rates**

Residential and Commercial Monthly Base Rate (includes 2,000 gallons)	\$21.61
Apartment Monthly Base Rate Per Unit (includes 2,000 gallons)	\$17.60
Gallons 2,000 and under	Included
Gallons 2,001 to 10,000	\$6.11
Gallons 10,001 to 25,000	\$8.03
Gallons Above 25,000	\$10.80
Residential (or Commercial Lawn Meter) Above 50,000	\$13.50

**8. OTHER WATER CONSERVATION MEASURES**

**8.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures**

The City of Midland currently has adopted the 2018 International Plumbing and will have the 2021 International Plumbing Code (IPC) adopted effective January 1, 2022. The City of Midland Plumbing Code requires a water-conserving fixture which includes requirements for maximum flows of 2.5 gallons per minute (GPM) for faucets, 3.0 for showerheads and 1.6 gallons per flush for toilets. These flow requirements are mandated by nationally recognized standards. In addition, water-using appliances like washing machines and dishwashers meet higher efficiency standards. The potential water reduction from these fixtures and appliances can be significant but historically have been difficult to measure. Also, this code allows the use of gray water systems for flushing of water closets and urinals and subsurface landscape irrigation. The use of gray water has not become prevalent however due to the code recognition of installation it could lead to additional water usage reduction.

**8.2 Reservoir System Operation Plan**

The City of Midland purchases water from the Colorado River Municipal Water District (CRMWD) and does not have surface water supplies for which to implement a reservoir system operation plan.

**8.3 Considerations for Landscape Water Management Regulations**

The City of Midland has chosen not to adopt a Landscape Ordinance. The City has made guidance information available to the public.

**8.4 Requirement for Water Conservation Plans by Wholesale Customers**

The City of Midland has one Wholesale water customer: Midland County Utility District. Refer to section 10 of this plan for Whole water supplier requirements per 30 TAC Section 288.5

**8.5 Coordination with Regional Water Planning Group**

In accordance with TCEQ regulations, a copy of this adopted water conservation plan will be sent to the Region F Water Planning Group.

**9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN**

A copy of the resolution adopted by the City Council regarding this water conservation plan is included in Appendix G of this plan. The official responsible for the implementation of the Water Conservation Plan is Carl Craigo, P.E., Director of Utilities.

**9.1 Schedule of Implementation**

The majority of the City of Midland's Water Conservation initiatives have been implemented before the updating of this plan and are ongoing unless stated previously herein.

**10. WHOLESALE PUBLIC WATER SUPPLIER REQUIREMENTS**

**10.1 Wholesale Customer Utility Profile**

Appendix G to this water conservation plan will contain the wholesale Utility Profile in the format recommended by the TCEQ

**10.2 Monitoring and Record Management Program**

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record management system will allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories.

In March 2019 the City of Midland upgraded its record management software to NorthStar which provides us with up-to-date information meeting the aforementioned rule requirements. Any wholesale customer will be included in this record management system.

**10.3 Metering and Leak Detection and Repair Program**

Once the City has entered into a contract for the wholesale of water a leak detection and repair program will be generated specific to the city and customer's needs. All customer meters will be Automated Metering Infrastructure (AMI) to improve customer service and operational efficiencies, reduce non-revenue water loss and more accurately measure and conserve resources; meters will be replaced on an 8-year cycle. The program will meet all the requirements of 30 TAC Section 288.5, will carefully track and meter water use, detect and repair leaks and provide regular monitoring of real losses from mains, reported breaks and leaks and storage overflow.

**10.4 Contracts**

Every contract for the wholesale of water that is entered, renewed, or extended after the adoption of this water conservation plan will include a requirement that the wholesale customer develops and implements a water conservation plan meeting the requirements of Title 30, Chapter 288, of the Texas Administrative Code. This requirement extends to each successive wholesale customer in the resale of the water.

**Appendix A**  
**List of References**

- (1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.2, and Subchapter B, Rule 288.20, downloaded from <http://texreg.sos.state.tx.us/public/>.

The following conservation plans and related documents were reviewed in the development of this plan.

- (2) Texas Commission on Environmental Quality Water Conservation Planning downloaded from [https://www.tceq.texas.gov/permitting/water\\_rights/wr\\_technical-resources/conserv.html](https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/conserv.html).
- (3) Texas Water Development Board: Report 362, "Water Conservation Best Management Practices" <http://www.twdb.texas.gov/conservation/BMPs/index.asp>.

August, 2021

**Appendix B**  
**Texas Commission on Environmental Quality Rules on Municipal Water**  
**Conservation Plans**

15

PACKET

26.18

September 14, 2021

**APPENDIX B**  
**Texas Administrative Code**

<b><u>TITLE 30</u></b>	ENVIRONMENTAL QUALITY
<b><u>PART 1</u></b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b><u>CHAPTER 288</u></b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<b><u>SUBCHAPTER A</u></b>	WATER CONSERVATION PLANS
<b>RULE §288.2</b>	<b>Water Conservation Plans for Municipal Uses by Public Water Suppliers</b>

---

(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

(i) residential;

(I) single family;

(II) multi-family;

(ii) commercial;

- (iii) institutional;
- (iv) industrial;
- (v) agricultural; and,
- (vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) 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 in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed after official adoption of the plan (by either ordinance, resolution, or tariff), 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 in this chapter. If the customer intends to resell the water, 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 the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(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) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

- (D) reuse and/or recycling of wastewater and/or graywater;
  - (E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;
  - (F) a program and/or ordinance(s) for landscape water management;
  - (G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and
  - (H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.
- (b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.
- (c) A public water supplier for municipal use 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. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.



## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### CONTACT INFORMATION

Name of Utility: City of Midland Water Purification Plant

Public Water Supply Identification Number (PWS ID): TX1650001

Certificate of Convenience and Necessity (CCN) Number: 10221

Surface Water Right ID Number: \_\_\_\_\_

Wastewater ID Number: 20083

Contact: First Name: Cory Last Name: Moose

Title: \_\_\_\_\_

Address: 300 N. Loraine City: Midland State: TX

Zip Code: 79701 Zip+4: \_\_\_\_\_ Email: \_\_\_\_\_

Telephone Number: 4326857937 Date: 6/23/2020

Is this person the designated Conservation Coordinator?  Yes  No

Regional Water Planning Group: F

Groundwater Conservation District: \_\_\_\_\_

Our records indicate that you:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

#### A. Population and Service Area Data

1. Current service area size in square miles: \_\_\_\_\_

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

2. Historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Water Service
2019	142,344	0	142,344
2018	136,089	0	136,089
2017	134,610	0	134,610
2016	128,037	0	128,037
2015	128,037	0	128,037

3. Projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Water Service
2020	146,187	0	146,187
2030	164,437	0	164,437
2040	184,169	0	184,169
2050	206,269	0	206,269
2060	225,000	0	225,000

4. Described source(s)/method(s) for estimating current and projected populations.

US Multi-Regional Econometric Model, The Perryman Group. See brochure with condensed information.

Attached file(s):

File Name	File Description
perryman-priority-midland-by-the-numbers-08-2019.pdf	

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

**B. System Input**

System input data for the previous five years.

Total System Input = Self-supplied + Imported- Exported

Year	Water Produced in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2019	5,465,223,333	2,777,210,526	0	8,242,433,859	159
2018	4,569,634,409	3,097,231,579	0	7,666,865,988	154
2017	4,735,620,408	2,382,693,878	0	7,118,314,286	145
2016	4,960,660,204	2,056,773,469	0	7,017,433,673	150
2015	5,013,644,898	1,976,204,082	0	6,989,848,980	150
<b>Historic Average</b>	4,948,956,650	2,458,022,707	0	7,406,979,357	152

**C. Water Supply System**

Attached file(s):

File Name	File Description
Midland Water Distribution System Analysis Report_Final - with Appendix.pdf	

- 1. Designed daily capacity of system in gallons 52,000,000
- 2. Storage Capacity
  - 2a. Elevated storage in gallons: 11
  - 2b. Ground storage in gallons: 19

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

**D. Projected Demands**

1. The estimated water supply requirements for the next ten years using population trends, historical water use, economic growth, etc

Year	Population	Water Demand (gallons)
2021	147,326	5,377,399,000
2022	151,488	5,529,312,000
2023	154,818	5,650,857,000
2024	155,341	5,669,946,500
2025	157,057	5,732,580,500
2026	158,974	5,802,551,000
2027	159,098	5,807,077,000
2028	160,436	5,855,914,000
2029	161,359	5,889,603,500
2030	164,437	6,038,450,500

2. Description of source data and how projected water demands were determined.

The Perryman report attached previously  
 Population \* 100 GPCPD historic use \* 365

**E. High Volume Customers**

1. The annual water use for the five highest volume  
**RETAIL** customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
City of Midland	Commercial	134,741,000	Treated
MISD	Commercial	84,450,000	Treated
Midland Memorial Hospital	Commercial	42,144,000	Treated
Midland College	Commercial	28,381,000	Treated
Midland Park at Caldera	Commercial	22,637,000	Treated

2. The annual water use for the five highest volume  
**WHOLESALE** customers.

Customer	Water Use Category	Annual Water Use	Treated or Raw
----------	--------------------	------------------	----------------

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

**F. Utility Data Comment Section**

Additional comments about utility data.

Section II: System Data

**A. Retail Water Supplier Connections**

1. List of active retail connections by major water use category.

Water Use Category Type	Total Retail Connections (Active + Inactive)	Percent of Total Connections
Residential - Single Family	44,711	89.18 %
Residential - Multi-Family	382	0.76 %
Industrial	1	0.00 %
Commercial	4,081	8.14 %
Institutional	959	1.91 %
Agricultural	0	0.00 %
<b>Total</b>	<b>50,134</b>	<b>100.00 %</b>

2. Net number of new retail connections by water use category for the previous five years.

Year	Net Number of New Retail Connections						Total
	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	
2019	6,344			510	2		6,856
2018	4,028			635	3		4,666
2017	4,576			657	1		5,234
2016	3,110			382	0		3,492
2015	1,252			262	0		1,514

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

**B. Accounting Data**

The previous five years' gallons of RETAIL water provided in each major water use category.

Year	Residential - Single Family	Residential - Multi-Family	Industrial	Commercial	Institutional	Agricultural	Total
2019	4,318,164,000	852,720,000	469,543,000	1,600,332,000	323,832,000	0	7,564,591,000
2018	4,042,726,000	805,572,000	337,982,000	1,493,896,000	515,396,000	0	7,195,572,000
2017	4,123,932,000	723,924,000	0	1,404,468,000	319,248,000	0	6,571,572,000
2016	4,140,936,000	635,280,000	0	1,423,992,000	383,916,000	0	6,584,124,000
2015	3,918,408,000	634,104,000	0	1,336,128,000	330,732,000	0	6,219,372,000

**C. Residential Water Use**

The previous five years' residential GPCD for single family and multi-family units.

Year	Total Residential GPCD
2019	100
2018	98
2017	99
2016	102
2015	97
Historic Average	99

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

**D. Annual and Seasonal Water Use**

1. The previous five years' gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Water				
	2019	2018	2017	2016	2015
January	348,570,000	345,117,000	378,273,000	345,117,000	348,570,000
February	292,950,000	356,223,000	333,012,000	356,223,000	292,950,000
March	352,478,000	405,413,000	451,328,000	405,413,000	352,478,000
April	432,380,000	414,340,000	431,168,000	414,340,000	432,380,000
May	346,465,000	492,457,000	592,877,000	492,457,000	346,465,000
June	522,639,000	541,482,000	603,899,000	541,482,000	522,639,000
July	528,697,000	565,802,000	573,972,000	565,802,000	528,697,000
August	549,804,000	643,879,000	615,413,000	643,879,000	549,804,000
September	564,267,000	508,584,000	545,955,000	508,584,000	564,267,000
October	463,037,000	486,946,000	511,048,000	486,964,000	463,037,000
November	323,312,000	430,778,000	445,085,000	430,778,000	323,312,000
December	392,138,000	406,349,000	399,360,000	406,349,000	392,138,000
<b>Total</b>	<b>5,116,737,000</b>	<b>5,597,370,000</b>	<b>5,881,390,000</b>	<b>5,597,388,000</b>	<b>5,116,737,000</b>

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

2. The previous five years' gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Water				
	2019	2018	2017	2016	2015
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
<b>Total</b>					

3. Summary of seasonal and annual water use.

	Summer RETAIL (Treated + Raw)	Total RETAIL (Treated + Raw)
2019	1,601,140,000	5,116,737,000
2018	1,751,163,000	5,597,370,000
2017	1,793,284,000	5,881,390,000
2016	1,751,163,000	5,597,388,000
2015	1,601,140,000	5,116,737,000
<b>Average in Gallons</b>	<b>1,699,578,000.00</b>	<b>5,461,924,400.00</b>

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

E. Water Loss

Water Loss data for the previous five years.

Year	Total Water Loss In Gallons	Water Loss In GPCD	Water Loss as a Percentage
2019	574,812,436	11	6.97 %
2018	375,458,163	8	4.90 %
2017	457,763,357	9	6.43 %
2016	345,591,752	7	4.92 %
2015	683,103,867	15	9.77 %
Average	487,345,915	10	6.60 %

F. Peak Day Use

Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2019	14,018,457	17403695	1.2415
2018	15,335,260	19034380	1.2412
2017	16,113,397	19492217	1.2097
2016	15,335,309	19034380	1.2412
2015	14,018,457	17403695	1.2415

G. Summary of Historic Water Use

Water Use Category	Historic Average	Percent of Connections	Percent of Water Use
Residential - Single Family	4,108,833,200	89.18 %	60.18 %
Residential - Multi-Family	730,320,000	0.76 %	10.70 %
Industrial	161,505,000	0.00 %	2.37 %
Commercial	1,451,763,200	8.14 %	21.26 %
Institutional	374,624,800	1.91 %	5.49 %
Agricultural	0	0.00 %	0.00 %

UTILITY PROFILE FOR RETAIL WATER SUPPLIER

H. System Data Comment Section

[Redacted comment section]

Section III: Wastewater System Data

A. Wastewater System Data

1. Design capacity of wastewater treatment plant(s) in gallons per day: 21,000,000

2. List of active wastewater connections by major water use category.

Water Use Category	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal	44,711		44,711	89.96 %
Industrial	1		1	0.00 %
Commercial	4,031		4,031	8.11 %
Institutional	959		959	1.93 %
Agricultural	0		0	0.00 %
<b>Total</b>	<b>49,702</b>		<b>49,702</b>	<b>100.00 %</b>

3. Percentage of water serviced by the wastewater system: 98.00 %

**UTILITY PROFILE FOR RETAIL WATER SUPPLIER**

4. Number of gallons of wastewater that was treated by the utility for the previous five years.

Month	Total Gallons of Treated Water				
	2019	2018	2017	2016	2015
January	301,230,000	317,080,000	281,240,000	291,590,000	273,278,000
February	274,710,000	267,670,000	248,540,000	263,130,000	251,080,000
March	302,800,000	304,990,000	279,130,000	284,380,000	280,034,000
April	317,840,000	298,040,000	270,880,000	281,780,000	253,110,000
May	352,840,000	311,490,000	282,500,000	290,290,000	253,031,000
June	326,800,000	317,110,000	295,220,000	279,820,000	259,116,000
July	332,020,000	308,650,000	296,560,000	285,790,000	281,464,000
August	324,070,000	315,760,000	312,090,000	294,110,000	300,354,000
September	311,300,000	307,820,000	297,520,000	289,410,000	275,584,000
October	305,900,000	305,440,000	314,580,000	286,820,000	278,516,000
November	286,450,000	288,570,000	297,140,000	279,490,000	271,464,000
December	284,100,000	298,700,000	300,150,000	294,350,000	274,140,000
<b>Total</b>	<b>3,720,060,000</b>	<b>3,641,320,000</b>	<b>3,475,550,000</b>	<b>3,420,960,000</b>	<b>3,251,171,000</b>

5. Could treated wastewater be substituted for potable water?

Yes  No

**B. Reuse Data**

1. Data by type of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site Irrigation	3,425,000
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape Irrigation (park, golf courses)	0
Agricultural	3,777,074,000
Discharge to surface water	
Evaporation Pond	
Other	
<b>Total</b>	<b>3,780,499,000</b>

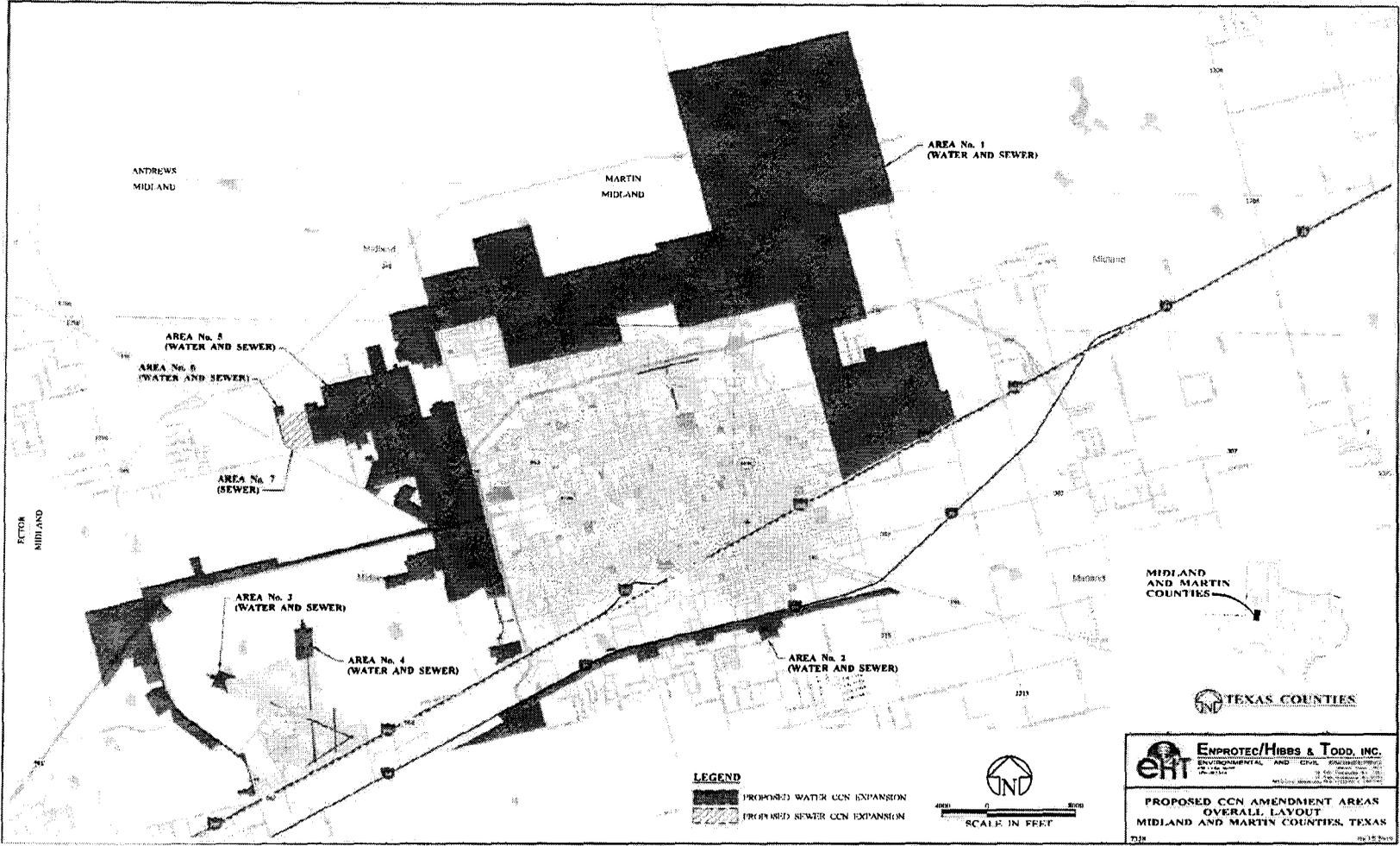


## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

### C. Wastewater System Data Comment

Additional comments and files to support or explain wastewater system data listed below.

--



PACKET  
 2637  
 September 14, 2021

Appendix E

CITY OF MIDLAND  
WATER SYSTEM

The City of Midland water system is supplied by both surface and groundwater surfaces. Approximately 60% of the current annual demand based on the previous 12 months is provided by The Colorado River Municipal Water District (CRMWD) through two (2) basic contracts. Water is supplied from primarily surface water supplies – lakes J.B. Thomas, J.V. Spence, and O.H. Ivie. Current contract volumes specify 15,001.78 AF from Lake Ivie and 17,797 AF from Lakes Thomas/Spence for the current year. Contractual amounts increase slightly each year through 2029 for the Thomas/Spence source at which time the average daily contractual flow is 17.97 MGD before the current contract ends. All water is treated at the Midland Water Purification Plant. The treatment plant is designed for 32 MGD.

The balance of water supplies the City owns or is contracted for is supplied by two groundwater systems. The Paul Davis Well Field is directly owned and operated by the City of Midland and can produce a maximum daily flow of approximately 16 MGD from 31 wells pulling from the Ogallala Aquifer. Water from the well field is pumped from approximately 25 miles north of Midland to a point in the Water Treatment Plant between final-filtered water and clear well storage to blend out elevated arsenic, selenium, and fluoride content in the groundwater. The T-Bar and Clearwater well fields are operated by the Midland County Fresh Water Supply District #1 who delivers water to the City of Midland via a contract arrangement for a peak delivery of 10 MGD. These 2 groundwater sources make up the remaining approximately 40% of the City of Midland's total current use.

Surface water plus the blended Paul Davis well water is pumped into the distribution system by a single high service pump station into each of two (2) separate pressure planes. Groundwater from the T-Bar/Clearwater Ranch sources is delivered to the City in a single line to a delivery point at which further disinfection is applied and the treated water is delivered into the western portion of the City of Midland's distribution system. System Ground Storage totals 19 MG which includes WPP clear well storage (12 MG), and distribution system storage (7 MG) \*. Five (5) Elevated storage tanks provide a total of 11 MG of elevated storage in the distribution system \*\*. The distribution network consists of greater than 600 miles of pipeline in 3 separate pressure planes. In 2022 a new 2 million gallon storage tank will come online providing additional capacity and pressure.

\*Note: Includes the bottom 21.5 ft. of 10 MG storage or approximately 6.61 MG of the Edgewood GST

\*\* Note: Includes the top 11 ft. of 10 MG storage or approximately 3.38 MG of the Edgewood GST

**Appendix F**  
**Wastewater Treatment Facilities Description**

24

PACKET

26.40

September 14, 2021

Appendix F

CITY OF MIDLAND  
WASTEWATER SYSTEM

. The City of Midland owns and operates the Midland Water Reclamation Facility (WRF) under TPDES permit No. WQ0010223-001. Wastewater is collected by approximately 700 miles of sanitary sewer collection lines. Wastewater treatment consists of preliminary, primary processes and an activated sludge process with partial flow capacity to produce up to 15 MGD of Type II reuse water.

Preliminary and primary treatment consists of:

- a bar screen
- rotating drum screens
- grit chambers
- classifiers
- primary clarifiers.

Secondary and tertiary treatment consists of:

- Biological reactor basins
- Turbo blowers
- Mixers for anoxic, oxic and swing zones
- Secondary clarifiers
- RAS/WAS pump station
- Cloth disk filtration
- UV Disinfection

The solids are anaerobically digested and either landfilled or land applied on the land application site.

Solids Handling Consist of:

- Aerated Sludge Holding
- Two anaerobic digesters and gas storage
- Sludge pumping facilities primary and secondary
- Screw Presses

In 2014 the City of Midland and Pioneer Natural Resources (PXD) are entered into an agreement for PXD to provide upgrades to the Midland WRF in return for the rights to use its treated effluent. 100% of the effluent from the WRF will be reused by PXD, discharged into the Midland Draw, or used for agricultural purposes. The City of Midland currently provides 98% of the effluent from the WRF to PXD.



*CITY OF MIDLAND*

# DROUGHT CONTINGENCY PLAN

# Table of Contents

<b>Section I: Declaration of Policy, Purpose and Intent</b> .....	4
<b>Section II: Application</b> .....	4
<b>Section III: TCEQ Rules</b> .....	4
<b>Section IV: Provisions to Inform the Public, Wholesale Customers and Opportunity for Public Input</b> ...	4
<b>Section V: Public and Wholesale Water Customer Education</b> .....	5
<b>Section VI: Coordination with Regional Water Planning Groups</b> .....	5
<b>Section VII: Initiation and Termination of Drought Response Stages</b> .....	5
<b>Stage 1 Mild Water Shortage Conditions</b> .....	5
<b>Stage 2 Moderate Water Shortage Conditions</b> .....	6
<b>Stage 3 Severe Water Shortage Conditions</b> .....	6
<b>Stage 4 Critical Water Shortage Conditions</b> .....	6
<b>Stage 5 Emergency Water Shortage Conditions</b> .....	7
<b>Section VIII: Goals for Reduction in Water Use</b> .....	7
<b>Stage 1, Mild Water Shortage Conditions</b> .....	7
<b>Stage 2, Moderate Water Shortage Conditions</b> .....	7
<b>Stage 3, Severe Water Shortage Conditions</b> .....	7
<b>Stage 4, Critical Water Shortage Conditions</b> .....	7
<b>Stage 5, Emergency Water Shortage Conditions</b> .....	7
<b>Section IX: Drought and Emergency Response Stages Management Measures and Restrictions</b> .....	8
<b>Stage 1 - Mild Water Shortage Conditions</b> .....	8
<b>Stage 2 - Moderate Water Shortage Conditions</b> .....	8
<b>Stage 3 - Severe Water Shortage Conditions</b> .....	9
<b>Stage 4 - Critical Water Shortage Conditions</b> .....	10
<b>Stage 5 - Emergency Water Shortage Conditions</b> .....	11
<b>Section X: Pro-Rata Water Allocation</b> .....	11
<b>Section XI: Enforcement</b> .....	12
<b>Section XII: Variances</b> .....	13
<b>Section XIII: Review and Update of Drought Contingency Plan</b> .....	14
<b>Section XIV: Judicial Notice</b> .....	14
<b>XV: Affirmative Defenses</b> .....	14
<b>Section XVI: Authority of Municipal Court</b> .....	15

**Appendix A** ..... 16  
**Appendix B**..... 18

# **Drought Contingency Plan for the City of Midland, Texas**

(Revised August 2021)

## **Section I: Declaration of Policy, Purpose and Intent**

To conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of a water supply shortage or other water supply emergency conditions, the City of Midland (hereinafter referred to as “City” hereby adopts the following Drought Contingency Plan (the Plan) for both wholesale and residential customers.

Water uses regulated or prohibited under this Plan are considered to be nonessential and continuation of such uses during times of water shortage or other emergency water supply conditions are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

## **Section II: Application**

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the City. The terms “person” and “customer” as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

## **Section III: TCEQ Rules**

The TCEQ rules governing the development of drought contingency plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 and Rule 288.22 of the Texas Administrative Code. Copy of rules also in Appendix B.

## **Section IV: Provisions to Inform the Public, Wholesale Customers and Opportunity for Public Input**

Opportunity for the public and wholesale customers to provide input into the preparation of the Drought Contingency Plan was and will be provided by the City of Midland utilizing press releases, emails and scheduling. Public notices of a public meeting to accept input of the Drought Contingency Plan will be posted in conspicuous places served by the public water system (city hall, county courthouse).

## **Section V: Public and Wholesale Water Customer Education**

The City of Midland will periodically provide the public with information about the Drought Contingency Plan, including information about the conditions under which each stage of the Drought Contingency Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided utilizing press releases, social media releases and utility bill inserts. The City will periodically provide wholesale water customers with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be disseminated by providing copies of the Plan and/or changes to the Plan, and scheduled meetings to discuss the Plan and any changes.

## **Section VI: Coordination with Regional Water Planning Groups**

The service area of the city of Midland is located within the Region F water planning area and the City of Midland has provided a copy of this Plan to the Region F Planning Group.

## **Section VII: Initiation and Termination of Drought Response Stages**

The City Manager, or his/her designee, shall monitor water supply and/or demand conditions daily and shall determine when conditions warrant initiation or termination of each stage of the Drought Contingency Plan. Public notification of the initiation or termination of drought response stages shall be through the press and social media releases. Wholesale water customers shall be notified through phone calls, emails, or meetings. The City of Midland shall notify the executive director within 5 business days of the implementation of any mandatory provisions of the drought contingency plan. The triggering criteria described below are based on the water supply sources and statistical analysis of the vulnerability of the water source under drought of record conditions.

### **Stage 1 Mild Water Shortage Conditions**

Requirements for initiation Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Appendix A, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 1 of the Drought Contingency Plan; or
- (b) Request of the Colorado River Municipal Water District due to the limitation in available supplies or their transmission facilities; or
- (c) The request of the Midland County Fresh Water Supply District #1 due to limitation in available supplies or transmission; or
- (d) Total daily water demand reaches 94% of the treatment plant capacity for 5 consecutive days.

Requirements for termination

Stage 1 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 days.

## **Stage 2 Moderate Water Shortage Conditions**

### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Appendix A of the Drought Contingency Plan, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 2 of the Drought Contingency Plan; or
- (b) Request of the Colorado River Municipal Water District due to the limitation in available supplies or their transmission facilities; or
- (c) Total daily water demand reaches or exceeds 95% of the water plant's capacity for 5 consecutive days; or
- (d) The request of the Midland County Fresh Water Supply District #1 due to limitation in available supplies or transmission.

### Requirements for termination

Stage 2 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

## **Stage 3 Severe Water Shortage Conditions**

### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Drought Contingency Plan, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 3 of the Drought Contingency Plan; or
- (b) The request of the Midland County Fresh Water Supply District #1 to initiation of Stage 3 of the Drought Contingency Plan due to limitation in available supplies or transmission.
- (c) The failure or threatening failure of a major system component will result in an immediate health or safety hazard; or
- (d) Total daily water demand reaches the system limit, stressing the system to failure.

### Requirements for termination

Stage 3 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

## **Stage 4 Critical Water Shortage Conditions**

### Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 4 of the Plan; or
- (b) The request of the Midland County Fresh Water Supply District #1 to initiation of Stage 3 of the Plan due to limitation in available supplies or transmission; or
- (c) Treated water storage levels do not restore overnight.

Requirements for termination

Stage 4 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

**Stage 5 Emergency Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Drought Contingency Plan when the City Manager, or his/her designee, determines that a water supply emergency exists based on:

- (a) Major water line breaks, or pump or system failure occurs, which cause unprecedented loss of capability to provide water service; or
- (b) Natural or man-made contamination of the water supply source(s).

Requirements for termination

Stage 5 of the Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days.

**Section VIII: Goals for Reduction in Water Use**

The City of Midland has established quantifiable goals for water use reduction for each stage of the Drought Contingency Plan. These goals are outlined below.

**Stage 1, Mild Water Shortage Conditions**

Goal: Achieve a 10 percent reduction in total daily water use

**Stage 2, Moderate Water Shortage Conditions**

Goal: Achieve a 15 percent reduction in total daily water use

**Stage 3, Severe Water Shortage Conditions**

Goal: Achieve a 20 percent reduction in total daily water use

**Stage 4, Critical Water Shortage Conditions**

Goal: Achieve a 25 percent reduction in total daily water use

**Stage 5, Emergency Water Shortage Conditions**

Goal: Achieve a 75 percent reduction in total daily water use

## Section IX: Drought and Emergency Response Stages Management Measures and Restrictions

Management measures are used to manage a limited water supply and/or reduce demand. The City Manager, or his/her designee, shall monitor water supply and/or demand conditions daily and, in accordance with the triggering criteria outlined in Section VII of the Plan, shall determine the condition implement the following actions upon publication of notice in a newspaper of general circulation:

### Stage 1 - Mild Water Shortage Conditions

#### (a) Supply Management Measures:

To manage limited water supplies and/or reduce water demand, the City of Midland shall implement the following measures:

- i. reduced flushing of water mains
- ii. increased use of alternative supply source(s) if available (Paul Davis Wellfield)

#### (b) Voluntary Water Use Restrictions:

- i. Water customers are requested to voluntarily limit the irrigation of landscaped areas to days and times designated by the City manager or his/her designee.
- ii. All operations of the City of Midland and its employees shall adhere to water use restrictions prescribed and shall be considered governmental functions. c) water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

### Stage 2 - Moderate Water Shortage Conditions

#### (a) Supply Management Measures:

To manage limited water supplies and/or reduce water demand, the City of Midland shall implement the following measures:

- i. reduced flushing of water mains
- ii. reduced irrigation of public landscaped areas
- iii. increased use of an alternative supply source(s).

#### (b) Mandatory Water Use Restrictions:

Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

- i. Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to days and times designated by the City Manager or his/her designee. However, irrigation of landscaped areas is permitted at any time if it is by means of a hand-held hose, a faucet-filled bucket or watering can of five (5) gallons or less, or a drip irrigation system.
- ii. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 6:00 p.m. and 10:00 a.m. beginning on their designated watering days. Such

washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

- iii. Use of water to fill, refill or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days between the hours of 6:00 p.m. and 10:00 a.m. beginning on their designated watering days.
- iv. Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- v. Use of water from hydrants shall be limited to firefighting, related activities, or other activities necessary to maintain public health, safety, and welfare, or activities deemed to be governmental functions undertaken by the City of Midland or its officials, agents, employees or independent contractors.
- vi. Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 6:00 p.m. and 10:00 a.m. beginning on their designated watering days. However, if the golf course utilizes a water source other than that provided by the City of Midland, the facility shall not be subject to these regulations.
- vii. All restaurants are prohibited from serving water to their patrons except when requested.
- viii. The following uses of water are defined as non-essential and are prohibited:
  - 1) Wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
  - 2) Use of Water to wash down buildings or structures for purposes other than immediate fire protection;
  - 3) Use of Water for dust control;
  - 4) Flushing gutters or permitting water to run or accumulate in any gutter or street; and
  - 5) Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

### **Stage 3 - Severe Water Shortage Conditions**

#### **(a) Supply Management Measures:**

To manage limited water supplies and/or reduce water demand, the City of Midland shall implement the following measures:

- i. reduced flushing of water mains

- ii. reduced irrigation of public landscaped areas to a minimum required to avoid vegetation loss
- iii. increased use of an alternative supply source(s).
- iv. 20% increase in water rates for use above 2,000 gallons

(b) Mandatory Water Use Restrictions. All requirements of Stage 2 shall remain in effect during Stage 3 except:

- i. Irrigation of landscaped areas shall be limited to days and times designated by the City Manager or his designee and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler systems only. The use of hose-end sprinklers is prohibited at all times.
- ii. The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the City of Midland.

#### Stage 4 - Critical Water Shortage Conditions

(a) Supply Management Measures:

To manage limited water supplies and reduce water demand, the City of Midland shall implement the following measures:

- i. reduced or discontinued flushing of water mains except during emergencies
- ii. reduced or discontinued irrigation of public landscaped areas to a minimum required to avoid vegetation loss
- iii. increased use of an alternative supply source(s):
- iv. 40% increase in water rates for use above 2,000 gallons

(b) Mandatory Water Use Restrictions:

All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

- i. Irrigation of landscaped areas shall be limited to days and times designated by the City Manager or his designee and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
- ii. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicles not occurring in a commercial car wash and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes shall occur only between the hours of 8:00 a.m. and 6:00 p.m.
- iii. The filling, refilling or adding of water to swimming pools, wading pools, and Jacuzzi-type pools are prohibited.
- iv. Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- v. No applications for new, additional, expanded, or increased-in-size water service

connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be allowed or approved.

### Stage 5 - Emergency Water Shortage Conditions

(a) Supply Management Measures:

To manage limited water supplies and reduce water demand The City of Midland shall discontinue the following:

- i. flushing of water mains
- ii. irrigation of public landscaped areas

(b) Mandatory Water Use Restrictions. All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

- i. irrigation of landscaped areas is prohibited.
- ii. use of water to wash any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle is prohibited.

### Section X: Pro-Rata Water Allocation

If the triggering criteria specified in Section VII of the Plan for Stage 3 - Severe Water Shortage Condition have been met, the City Manager is hereby authorized to initiate allocation of water supplies on a pro-rata basis in accordance with Texas Water Code Section 11.039. Every wholesale water contract, (treated and untreated water) entered into or renewed after the adoption of this Plan, including any contract extensions, will contain language notifying parties to the contract that the water to be distributed shall be divided in accordance with the following water allocation policies and procedures:

- (a) A wholesale customer's monthly allocation shall be a percentage of the customer's water usage baseline. The percentage will be set by resolution of the Midland City Council based on the City Manager's assessment of the severity of the water shortage condition and the need to curtail water diversions and/or deliveries and may be adjusted periodically by resolution of the Council as conditions warrant. Once pro-rata allocation is in effect, water diversions by, or deliveries to, each wholesale customer shall be limited to the allocation established for each month.
- (b) A monthly water usage allocation shall be established by the City Manager, or his/her designee, for each wholesale customer. The wholesale customer's water usage baseline will be computed on the average water usage by month for the last five (5) year period. If the wholesale water customer's billing history is less than 5 years, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists.
- (c) The City Manager shall provide notice by certified mail to each wholesale customer informing them of their monthly water usage allocations and shall notify the news media and the executive director of the Texas Commission on Environmental Quality upon initiation of pro-rata water allocation.
- (d) Upon request of the customer or at the initiative of the City Manager, the allocation may be reduced or increased if:
  - i. the designated period does not accurately reflect the wholesale customer's

- normal water usage
- ii. the customer agrees to transfer part of its allocation to another wholesale customer, or
- iii. other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the Midland City Council.

## Section XI: Enforcement

- (a) No person shall use or allow the use of water from the City of Midland for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount above that permitted by the drought response stage in effect at the time pursuant to action taken by the City Manager, or his/her designee, under provisions of this Plan.
- (b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not more than five hundred (\$500) dollars. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more violations of this Plan, the City Manager shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of the re-connection charge, established by City policy, and any other costs incurred by the City of Midland in discontinuing service. In addition, suitable assurance must be given to the City Manager that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought in any court of competent jurisdiction.
- (c) Any person, including a person classified as a water customer of the City of Midland, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to present evidence that he/she did not commit the violation.
- (d) In any prosecution charging a violation of this Ordinance at a single-family residence, proof that the defendant named in the complaint was at the time of such violation shown in the City of Midland Customer Service Records to be the occupant or customer of the premises shall constitute in evidence a prima facie presumption that said person used or allowed the use of water in violation of this Ordinance.
- (e) Any police officer of the City of Midland, or other employees of the City of Midland designated by the City Manager, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall provide direction as to how to respond or appeal. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, or an agent or employee of a violator. The alleged violator shall appear in municipal

court to enter a plea of guilty, not guilty or no contest for the violation of this Plan. If the alleged violator fails to appear in municipal court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant.

## Section XII: Variances

- (a) The City Manager, or his/her designee, may, in writing, grant a temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:
- i. Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other conditions for which the Plan is in effect.
  - ii. Alternative methods can be implemented which will achieve the same level of reduction in water use.
- (b) Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the City of Midland within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the City Manager, or his/her designee, and shall include the following:
- i. Name and address of the petitioner(s).
  - ii. Purpose of water use.
  - iii. Specific provision(s) of the Plan from which the petitioner is requesting relief.
  - iv. Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
  - v. Description of the relief requested.
  - vi. Period of time for which the variance is sought.
  - vii. Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
  - viii. Other pertinent information.
- (c) Variances granted by the City of Midland shall be subject to the following conditions unless waived or modified by the City Manager or his/her designee:
- i. Variances granted shall include a timetable for compliance.
  - ii. Variances granted shall expire when the Plan is no longer in effect unless the petitioner has failed to meet specified requirements.
  - iii. A person who receives a variance shall file the variance with the City of Midland Municipal Court within 72 hours of the granting of said variance.

- (d) No variance shall be retroactive or otherwise justify any violation of this Plan occurring before the issuance of the variance. Temporary variances may be granted by the same authority at any time during the execution of this plan upon submission of the information requested above. These variances will not exceed 30 days and must be approved before the deviation from the plan otherwise a violation will result.

### **Section XIII: Review and Update of Drought Contingency Plan**

The City of Midland will review and update the Plan at least every five years and consistent with State law requirements. If the Plan is implemented during a water shortage, data obtained during the plan implementation will be used to make any necessary modifications. Additionally, the plan will be updated as appropriate based on new or updated information regarding the system's design and delivery capacity.

### **Section XIV: Judicial Notice**

- (a) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of this Ordinance.
- (b) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of records in the City's Customer Service Division.
- (c) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of the drought and emergency response stage in effect on the date of the alleged violation(s).
- (d) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of the City of Midland wholesale water purchase contract with the Colorado River Municipal Water District and any notices received requesting initiation of the Drought Contingency Plan.
- (e) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of the City Manager's designation of the drought and emergency response stage in effect on the date of the alleged violation(s).

### **XV: Affirmative Defenses**

In any prosecution for the violation of any provision of this Ordinance, it shall not be required or necessary for the complaint to negate or for the state to prove any exception contained in this Ordinance concerning any prohibited act. Provided, however, that any such exception made in this Ordinance is an affirmative defense to prosecution under this Ordinance, and may be urged as an affirmative defense by the person charged by such complaint as authorized by Section 2.04 of the Texas Penal Code. It is an affirmative defense to prosecution under this Ordinance that the water used is not produced by the City of Midland

## **Section XVI: Authority of Municipal Court**

Nothing in this Ordinance shall be construed to limit the City of Midland Municipal Court's authority and remedies.

## Appendix A

### Definitions:

For the purposes of this Plan, the following definitions shall apply:

**Aesthetic water use:** water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

**Alternative water sources:** Alternative water source(s) for the City of Midland is the Paul Davis Well Field. This field is used on an emergency basis and can provide up to 10 MGD.

**Commercial and institutional water use:** water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

**Conservation:** those practices, techniques, and technologies that 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 supply is conserved and made available for future or alternative uses.

**CRMWD:** The Colorado River Municipal Water District. They supply surface water wholesale to the City of Midland.

**Customer:** any person, company, or organization using water supplied by the City of Midland.

**Domestic water use:** water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

**Even number address:** street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

**Industrial water use:** the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

**Landscape irrigation use:** Water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

**Non-essential water use:** water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

Irrigation of landscaped areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan; Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicles. Use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas. Use of water to wash down buildings or structures for purposes other than immediate fire protection. Flushing gutters or permitting water to run or accumulate in any gutter or street. Use of water to fill, refill or add to any indoor or outdoor swimming pools or Jacuzzi-type pool. Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s). Use of water from hydrants for construction purposes or any other purpose other than firefighting.

**Odd-numbered address:** street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

**Water:** For the purposes of this Drought Contingency Plan, the term “water” shall mean water from the City of Midland used for residential, commercial, industrial, agricultural or governmental purposes. The term water shall not include water from a private well.

## Appendix B

### ENVIRONMENTAL QUALITY

<b>PART 1 CHAPTER 288</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b>SUBCHAPTER B</b>	WATER CONSERVATION PLANS, DROUGHT
	CONTINGENCY PLANS, GUIDELINES AND
	REQUIREMENTS DROUGHT CONTINGENCY PLANS
<b>RULE '288.20</b>	<b>Drought Contingency Plans for Municipal Uses by Public</b>
	<b>Water Suppliers</b>

(a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.

(1) Minimum requirements. Drought contingency plans must include the following minimum elements.

(A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. 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.

(B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.

(C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.

(D) 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.

(E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:

(i) reduction in available water supply up to a repeat of the drought of record;

(ii) water production or distribution system limitations;

(iii) supply source contamination; or

(iv) system outage due to the failure or damage of major water system components (e.g., pumps).

(F) 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 subparagraph are not enforceable.

(G) 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:

(i) curtailment of non-essential water uses; and

(ii) utilization of alternative water sources and/or alternative delivery mechanisms 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.).

(H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.

(I) The drought contingency plan must include procedures for granting variances to the plan.

(J) The drought contingency plan must include procedures for the enforcement of mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.

(2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.

(3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.

(b) A wholesale or retail 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 retail 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 the adoption or revision of the regional water plan.

## **ENVIRONMENTAL QUALITY**

### **PART 1 CHAPTER 288 SUBCHAPTER B**

### **TEXAS COMMISSION ON ENVIRONMENTAL QUALITY WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS DROUGHT CONTINGENCY PLANS**

#### **RULE 288.22**

#### **Drought Contingency Plans for Wholesale Water Suppliers**

- (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

ORDINANCE NO. 10240

**AN ORDINANCE AMENDING THE CITY OF MIDLAND'S DROUGHT CONTINGENCY PLAN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF FIVE HUNDRED DOLLARS (\$500.00); AND ORDERING PUBLICATION**

**WHEREAS**, the City Council approved the City of Midland's current drought contingency plan by Ordinance No. 9310, which was approved on August 26, 2014; and

**WHEREAS**, the Texas Commission on Environmental Quality ("TCEQ") requires the City to submit potential future wholesale water customer information in order to retain the City's water rights during discharge activities; and

**WHEREAS**, the City Council finds it to be in the public interest to increase the water rates during Stages 3 and 4 of the drought response stages for consumption above 2,000 gallons; and

**WHEREAS**, the City Council finds it to be in the public interest to amend the City of Midland's drought contingency plan to include said TCEQ requirement and rate changes;

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:**

**SECTION ONE.** That the drought contingency plan attached hereto and marked as Exhibit A, is hereby adopted and approved for all purposes.

**SECTION TWO.** The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

**SECTION THREE.** If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of

Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

**SECTION FOUR.** The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding five hundred dollars (\$500.00). It is hereby declared that the culpable mental state required by Texas Penal Code Section 6.02 is specifically negated and clearly and plainly dispensed with and an offense under this ordinance is declared to be a strict liability offense. Each day such violation shall continue, or be permitted to continue, shall be deemed a separate offense.

**SECTION FIVE.** The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the 14th day of September, A.D., 2021; and passed to second reading on motion of Council member Blong, seconded by Council member Ladd, by the following vote:

Council members voting "AYE": Blong, Trost, Robnett, Payton, Dufford, Ladd

Council members voting "NAY": None

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member Trost, seconded by Council member Ladd, on the 28th day of September, A.D., 2021, at a regular meeting of the City Council:

Council members voting "AYE": Blong, Trost, Robnett, Dufford, Ladd, Norman

Council members voting 'NAY': None

PASSED AND APPROVED THIS 28th day of September, A.D., 2021.



Patrick N. Payton, Mayor

ATTEST:

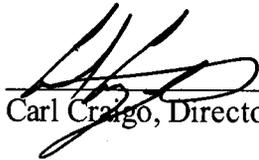


Amy M. Turner, City Secretary

APPROVED AS TO CONTENT  
AND COMPLETENESS:

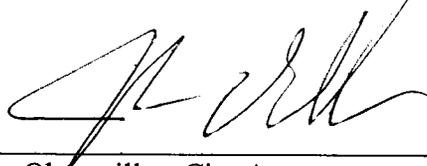


Robert Patrick, City Manager



Carl Craig, Director of Utilities

APPROVED ONLY AS TO FORM:



John Ohnemiller, City Attorney



***CITY OF MIDLAND***

# DROUGHT CONTINGENCY PLAN

**EXHIBIT A**

## Table of Contents

<b>Section I: Declaration of Policy, Purpose and Intent</b> .....	4
<b>Section II: Application</b> .....	4
<b>Section III: TCEQ Rules</b> .....	4
<b>Section IV: Provisions to Inform the Public, Wholesale Customers and Opportunity for Public Input</b> ...	4
<b>Section V: Public and Wholesale Water Customer Education</b> .....	5
<b>Section VI: Coordination with Regional Water Planning Groups</b> .....	5
<b>Section VII: Initiation and Termination of Drought Response Stages</b> .....	5
<b>Stage 1 Mild Water Shortage Conditions</b> .....	5
<b>Stage 2 Moderate Water Shortage Conditions</b> .....	6
<b>Stage 3 Severe Water Shortage Conditions</b> .....	6
<b>Stage 4 Critical Water Shortage Conditions</b> .....	6
<b>Stage 5 Emergency Water Shortage Conditions</b> .....	7
<b>Section VIII: Goals for Reduction in Water Use</b> .....	7
<b>Stage 1, Mild Water Shortage Conditions</b> .....	7
<b>Stage 2, Moderate Water Shortage Conditions</b> .....	7
<b>Stage 3, Severe Water Shortage Conditions</b> .....	7
<b>Stage 4, Critical Water Shortage Conditions</b> .....	7
<b>Stage 5, Emergency Water Shortage Conditions</b> .....	7
<b>Section IX: Drought and Emergency Response Stages Management Measures and Restrictions</b> .....	8
<b>Stage 1 - Mild Water Shortage Conditions</b> .....	8
<b>Stage 2 - Moderate Water Shortage Conditions</b> .....	8
<b>Stage 3 - Severe Water Shortage Conditions</b> .....	9
<b>Stage 4 - Critical Water Shortage Conditions</b> .....	10
<b>Stage 5 - Emergency Water Shortage Conditions</b> .....	11
<b>Section X: Pro-Rata Water Allocation</b> .....	11
<b>Section XI: Enforcement</b> .....	12
<b>Section XII: Variances</b> .....	13
<b>Section XIII: Review and Update of Drought Contingency Plan</b> .....	14
<b>Section XIV: Judicial Notice</b> .....	14
<b>XV: Affirmative Defenses</b> .....	14
<b>Section XVI: Authority of Municipal Court</b> .....	15

**Appendix A** ..... 16  
**Appendix B**..... 18

# **Drought Contingency Plan for the City of Midland, Texas**

(Revised August 2021)

## **Section I: Declaration of Policy, Purpose and Intent**

To conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of a water supply shortage or other water supply emergency conditions, the City of Midland (hereinafter referred to as "City" hereby adopts the following Drought Contingency Plan (the Plan) for both wholesale and residential customers.

Water uses regulated or prohibited under this Plan are considered to be nonessential and continuation of such uses during times of water shortage or other emergency water supply conditions are deemed to constitute a waste of water which subjects the offender(s) to penalties as defined in Section XI of this Plan.

## **Section II: Application**

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the City. The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

## **Section III: TCEQ Rules**

The TCEQ rules governing the development of drought contingency plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 and Rule 288.22 of the Texas Administrative Code. Copy of rules also in Appendix B.

## **Section IV: Provisions to Inform the Public, Wholesale Customers and Opportunity for Public Input**

Opportunity for the public and wholesale customers to provide input into the preparation of the Drought Contingency Plan was and will be provided by the City of Midland utilizing press releases, emails and scheduling. Public notices of a public meeting to accept input of the Drought Contingency Plan will be posted in conspicuous places served by the public water system (city hall, county courthouse).

## **Section V: Public and Wholesale Water Customer Education**

The City of Midland will periodically provide the public with information about the Drought Contingency Plan, including information about the conditions under which each stage of the Drought Contingency Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided utilizing press releases, social media releases and utility bill inserts. The City will periodically provide wholesale water customers with information about the Plan, including information about the conditions under which each stage of the Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be disseminated by providing copies of the Plan and/or changes to the Plan, and scheduled meetings to discuss the Plan and any changes.

## **Section VI: Coordination with Regional Water Planning Groups**

The service area of the city of Midland is located within the Region F water planning area and the City of Midland has provided a copy of this Plan to the Region F Planning Group.

## **Section VII: Initiation and Termination of Drought Response Stages**

The City Manager, or his/her designee, shall monitor water supply and/or demand conditions daily and shall determine when conditions warrant initiation or termination of each stage of the Drought Contingency Plan. Public notification of the initiation or termination of drought response stages shall be through the press and social media releases. Wholesale water customers shall be notified through phone calls, emails, or meetings. The City of Midland shall notify the executive director within 5 business days of the implementation of any mandatory provisions of the drought contingency plan. The triggering criteria described below are based on the water supply sources and statistical analysis of the vulnerability of the water source under drought of record conditions.

### **Stage 1 Mild Water Shortage Conditions**

Requirements for initiation Customers shall be requested to voluntarily conserve water and adhere to the prescribed restrictions on certain water uses, defined in Appendix A, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 1 of the Drought Contingency Plan; or
- (b) Request of the Colorado River Municipal Water District due to the limitation in available supplies or their transmission facilities; or
- (c) The request of the Midland County Fresh Water Supply District #1 due to limitation in available supplies or transmission; or
- (d) Total daily water demand reaches 94% of the treatment plant capacity for 5 consecutive days.

Requirements for termination

Stage 1 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 days.

### **Stage 2 Moderate Water Shortage Conditions**

#### **Requirements for initiation**

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses provided in Appendix A of the Drought Contingency Plan, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 2 of the Drought Contingency Plan; or
- (b) Request of the Colorado River Municipal Water District due to the limitation in available supplies or their transmission facilities; or
- (c) Total daily water demand reaches or exceeds 95% of the water plant's capacity for 5 consecutive days; or
- (d) The request of the Midland County Fresh Water Supply District #1 due to limitation in available supplies or transmission.

#### **Requirements for termination**

Stage 2 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

### **Stage 3 Severe Water Shortage Conditions**

#### **Requirements for initiation**

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 3 of this Drought Contingency Plan, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 3 of the Drought Contingency Plan; or
- (b) The request of the Midland County Fresh Water Supply District #1 to initiation of Stage 3 of the Drought Contingency Plan due to limitation in available supplies or transmission.
- (c) The failure or threatening failure of a major system component will result in an immediate health or safety hazard; or
- (d) Total daily water demand reaches the system limit, stressing the system to failure.

#### **Requirements for termination**

Stage 3 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

### **Stage 4 Critical Water Shortage Conditions**

#### **Requirements for initiation**

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses for Stage 4 of this Plan, when:

- (a) Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 4 of the Plan; or
- (b) The request of the Midland County Fresh Water Supply District #1 to initiation of Stage 3 of the Plan due to limitation in available supplies or transmission; or
- (c) Treated water storage levels do not restore overnight.

Requirements for termination

Stage 4 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

**Stage 5 Emergency Water Shortage Conditions**

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Drought Contingency Plan when the City Manager, or his/her designee, determines that a water supply emergency exists based on:

- (a) Major water line breaks, or pump or system failure occurs, which cause unprecedented loss of capability to provide water service; or
- (b) Natural or man-made contamination of the water supply source(s).

Requirements for termination

Stage 5 of the Plan may be rescinded when all of the triggering events have ceased for 3 consecutive days.

**Section VIII: Goals for Reduction in Water Use**

The City of Midland has established quantifiable goals for water use reduction for each stage of the Drought Contingency Plan. These goals are outlined below.

**Stage 1, Mild Water Shortage Conditions**

Goal: Achieve a 10 percent reduction in total daily water use

**Stage 2, Moderate Water Shortage Conditions**

Goal: Achieve a 15 percent reduction in total daily water use

**Stage 3, Severe Water Shortage Conditions**

Goal: Achieve a 20 percent reduction in total daily water use

**Stage 4, Critical Water Shortage Conditions**

Goal: Achieve a 25 percent reduction in total daily water use

**Stage 5, Emergency Water Shortage Conditions**

Goal: Achieve a 75 percent reduction in total daily water use

## **Section IX: Drought and Emergency Response Stages Management Measures and Restrictions**

Management measures are used to manage a limited water supply and/or reduce demand. The City Manager, or his/her designee, shall monitor water supply and/or demand conditions daily and, in accordance with the triggering criteria outlined in Section VII of the Plan, shall determine the condition implement the following actions upon publication of notice in a newspaper of general circulation:

### **Stage 1 - Mild Water Shortage Conditions**

#### **(a) Supply Management Measures:**

To manage limited water supplies and/or reduce water demand, the City of Midland shall implement the following measures:

- i. reduced flushing of water mains
- ii. increased use of alternative supply source(s) if available (Paul Davis Wellfield)

#### **(b) Voluntary Water Use Restrictions:**

- i. Water customers are requested to voluntarily limit the irrigation of landscaped areas to days and times designated by the City manager or his/her designee.
- ii. All operations of the City of Midland and its employees shall adhere to water use restrictions prescribed and shall be considered governmental functions. c) water customers are requested to practice water conservation and to minimize or discontinue water use for non-essential purposes.

### **Stage 2 - Moderate Water Shortage Conditions**

#### **(a) Supply Management Measures:**

To manage limited water supplies and/or reduce water demand, the City of Midland shall implement the following measures:

- i. reduced flushing of water mains
- ii. reduced irrigation of public landscaped areas
- iii. increased use of an alternative supply source(s).

#### **(b) Mandatory Water Use Restrictions:**

Under threat of penalty for violation, the following water use restrictions shall apply to all persons:

- i. Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to days and times designated by the City Manager or his/her designee. However, irrigation of landscaped areas is permitted at any time if it is by means of a hand-held hose, a faucet-filled bucket or watering can of five (5) gallons or less, or a drip irrigation system.
- ii. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 6:00 p.m. and 10:00 a.m. beginning on their designated watering days. Such

washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public are contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

- iii. Use of water to fill, refill or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days between the hours of 6:00 p.m. and 10:00 a.m. beginning on their designated watering days.
- iv. Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- v. Use of water from hydrants shall be limited to firefighting, related activities, or other activities necessary to maintain public health, safety, and welfare, or activities deemed to be governmental functions undertaken by the City of Midland or its officials, agents, employees or independent contractors.
- vi. Use of water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 6:00 p.m. and 10:00 a.m. beginning on their designated watering days. However, if the golf course utilizes a water source other than that provided by the City of Midland, the facility shall not be subject to these regulations.
- vii. All restaurants are prohibited from serving water to their patrons except when requested.
- viii. The following uses of water are defined as non-essential and are prohibited:
  - 1) Wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
  - 2) Use of Water to wash down buildings or structures for purposes other than immediate fire protection;
  - 3) Use of Water for dust control;
  - 4) Flushing gutters or permitting water to run or accumulate in any gutter or street; and
  - 5) Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

### Stage 3 - Severe Water Shortage Conditions

#### (a) Supply Management Measures:

To manage limited water supplies and/or reduce water demand, the City of Midland shall implement the following measures:

- i. reduced flushing of water mains

- ii. reduced irrigation of public landscaped areas to a minimum required to avoid vegetation loss
- iii. increased use of an alternative supply source(s).
- iv. 20% increase in water rates for use above 2,000 gallons

(b) Mandatory Water Use Restrictions. All requirements of Stage 2 shall remain in effect during Stage 3 except:

- i. Irrigation of landscaped areas shall be limited to days and times designated by the City Manager or his designee and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler systems only. The use of hose-end sprinklers is prohibited at all times.
- ii. The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the City of Midland.

#### Stage 4 - Critical Water Shortage Conditions

(a) Supply Management Measures:

To manage limited water supplies and reduce water demand, the City of Midland shall implement the following measures:

- i. reduced or discontinued flushing of water mains except during emergencies
- ii. reduced or discontinued irrigation of public landscaped areas to a minimum required to avoid vegetation loss
- iii. increased use of an alternative supply source(s):
- iv. 40% increase in water rates for use above 2,000 gallons

(b) Mandatory Water Use Restrictions:

All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

- i. Irrigation of landscaped areas shall be limited to days and times designated by the City Manager or his designee and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
- ii. Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicles not occurring in a commercial car wash and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes shall occur only between the hours of 8:00 a.m. and 6:00 p.m.
- iii. The filling, refilling or adding of water to swimming pools, wading pools, and Jacuzzi-type pools are prohibited.
- iv. Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.
- v. No applications for new, additional, expanded, or increased-in-size water service

connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be allowed or approved.

#### **Stage 5 - Emergency Water Shortage Conditions**

**(a) Supply Management Measures:**

To manage limited water supplies and reduce water demand The City of Midland shall discontinue the following:

- i. flushing of water mains
- ii. irrigation of public landscaped areas

**(b) Mandatory Water Use Restrictions.** All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

- i. irrigation of landscaped areas is prohibited.
- ii. use of water to wash any motor vehicle, motorbike, boat, trailer, airplane, or other vehicle is prohibited.

#### **Section X: Pro-Rata Water Allocation**

If the triggering criteria specified in Section VII of the Plan for Stage 3 - Severe Water Shortage Condition have been met, the City Manager is hereby authorized to initiate allocation of water supplies on a pro-rata basis in accordance with Texas Water Code Section 11.039. Every wholesale water contract, (treated and untreated water) entered into or renewed after the adoption of this Plan, including any contract extensions, will contain language notifying parties to the contract that the water to be distributed shall be divided in accordance with the following water allocation policies and procedures:

- (a) A wholesale customer's monthly allocation shall be a percentage of the customer's water usage baseline. The percentage will be set by resolution of the Midland City Council based on the City Manager's assessment of the severity of the water shortage condition and the need to curtail water diversions and/or deliveries and may be adjusted periodically by resolution of the Council as conditions warrant. Once pro-rata allocation is in effect, water diversions by, or deliveries to, each wholesale customer shall be limited to the allocation established for each month.
- (b) A monthly water usage allocation shall be established by the City Manager, or his/her designee, for each wholesale customer. The wholesale customer's water usage baseline will be computed on the average water usage by month for the last five (5) year period. If the wholesale water customer's billing history is less than 5 years, the monthly average for the period for which there is a record shall be used for any monthly period for which no billing history exists.
- (c) The City Manager shall provide notice by certified mail to each wholesale customer informing them of their monthly water usage allocations and shall notify the news media and the executive director of the Texas Commission on Environmental Quality upon initiation of pro-rata water allocation.
- (d) Upon request of the customer or at the initiative of the City Manager, the allocation may be reduced or increased if:
  - i. the designated period does not accurately reflect the wholesale customer's

- normal water usage
- ii. the customer agrees to transfer part of its allocation to another wholesale customer, or
- iii. other objective evidence demonstrates that the designated allocation is inaccurate under present conditions. A customer may appeal an allocation established hereunder to the Midland City Council.

## Section XI: Enforcement

- (a) No person shall use or allow the use of water from the City of Midland for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount above that permitted by the drought response stage in effect at the time pursuant to action taken by the City Manager, or his/her designee, under provisions of this Plan.
- (b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not more than five hundred (\$500) dollars. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more violations of this Plan, the City Manager shall, upon due notice to the customer, be authorized to discontinue water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of the re-connection charge, established by City policy, and any other costs incurred by the City of Midland in discontinuing service. In addition, suitable assurance must be given to the City Manager that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought in any court of competent jurisdiction.
- (c) Any person, including a person classified as a water customer of the City of Midland, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to present evidence that he/she did not commit the violation.
- (d) In any prosecution charging a violation of this Ordinance at a single-family residence, proof that the defendant named in the complaint was at the time of such violation shown in the City of Midland Customer Service Records to be the occupant or customer of the premises shall constitute in evidence a prima facie presumption that said person used or allowed the use of water in violation of this Ordinance.
- (e) Any police officer of the City of Midland, or other employees of the City of Midland designated by the City Manager, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall provide direction as to how to respond or appeal. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, or an agent or employee of a violator. The alleged violator shall appear in municipal

court to enter a plea of guilty, not guilty or no contest for the violation of this Plan. If the alleged violator fails to appear in municipal court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant.

## Section XII: Variances

- (a) The City Manager, or his/her designee, may, in writing, grant a temporary variance for existing water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:
- i. Compliance with this Plan cannot be technically accomplished during the duration of the water supply shortage or other conditions for which the Plan is in effect.
  - ii. Alternative methods can be implemented which will achieve the same level of reduction in water use.
- (b) Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the City of Midland within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the City Manager, or his/her designee, and shall include the following:
- i. Name and address of the petitioner(s).
  - ii. Purpose of water use.
  - iii. Specific provision(s) of the Plan from which the petitioner is requesting relief.
  - iv. Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
  - v. Description of the relief requested.
  - vi. Period of time for which the variance is sought.
  - vii. Alternative water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
  - viii. Other pertinent information.
- (c) Variances granted by the City of Midland shall be subject to the following conditions unless waived or modified by the City Manager or his/her designee:
- i. Variances granted shall include a timetable for compliance.
  - ii. Variances granted shall expire when the Plan is no longer in effect unless the petitioner has failed to meet specified requirements.
  - iii. A person who receives a variance shall file the variance with the City of Midland Municipal Court within 72 hours of the granting of said variance.

- (d) No variance shall be retroactive or otherwise justify any violation of this Plan occurring before the issuance of the variance. Temporary variances may be granted by the same authority at any time during the execution of this plan upon submission of the information requested above. These variances will not exceed 30 days and must be approved before the deviation from the plan otherwise a violation will result.

### **Section XIII: Review and Update of Drought Contingency Plan**

The City of Midland will review and update the Plan at least every five years and consistent with State law requirements. If the Plan is implemented during a water shortage, data obtained during the plan implementation will be used to make any necessary modifications. Additionally, the plan will be updated as appropriate based on new or updated information regarding the system's design and delivery capacity.

### **Section XIV: Judicial Notice**

- (a) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of this Ordinance.
- (b) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of records in the City's Customer Service Division.
- (c) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of the drought and emergency response stage in effect on the date of the alleged violation(s).
- (d) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of the City of Midland wholesale water purchase contract with the Colorado River Municipal Water District and any notices received requesting initiation of the Drought Contingency Plan.
- (e) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall take judicial notice of the City Manager's designation of the drought and emergency response stage in effect on the date of the alleged violation(s).

### **XV: Affirmative Defenses**

In any prosecution for the violation of any provision of this Ordinance, it shall not be required or necessary for the complaint to negate or for the state to prove any exception contained in this Ordinance concerning any prohibited act. Provided, however, that any such exception made in this Ordinance is an affirmative defense to prosecution under this Ordinance, and may be urged as an affirmative defense by the person charged by such complaint as authorized by Section 2.04 of the Texas Penal Code. It is an affirmative defense to prosecution under this Ordinance that the water used is not produced by the City of Midland

## **Section XVI: Authority of Municipal Court**

Nothing in this Ordinance shall be construed to limit the City of Midland Municipal Court's authority and remedies.

## Appendix A

### Definitions:

For the purposes of this Plan, the following definitions shall apply:

**Aesthetic water use:** water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

**Alternative water sources:** Alternative water source(s) for the City of Midland is the Paul Davis Well Field. This field is used on an emergency basis and can provide up to 10 MGD.

**Commercial and institutional water use:** water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

**Conservation:** those practices, techniques, and technologies that 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 supply is conserved and made available for future or alternative uses.

**CRMWD:** The Colorado River Municipal Water District. They supply surface water wholesale to the City of Midland.

**Customer:** any person, company, or organization using water supplied by the City of Midland.

**Domestic water use:** water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

**Even number address:** street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

**Industrial water use:** the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

**Landscape irrigation use:** Water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

**Non-essential water use:** water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

Irrigation of landscaped areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan; Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicles. Use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas. Use of water to wash down buildings or structures for purposes other than immediate fire protection. Flushing gutters or permitting water to run or accumulate in any gutter or street. Use of water to fill, refill or add to any indoor or outdoor swimming pools or Jacuzzi-type pool. Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s). Use of water from hydrants for construction purposes or any other purpose other than firefighting.

**Odd-numbered address:** street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

**Water:** For the purposes of this Drought Contingency Plan, the term “water” shall mean water from the City of Midland used for residential, commercial, industrial, agricultural or governmental purposes. The term water shall not include water from a private well.

## Appendix B

### ENVIRONMENTAL QUALITY

<b>PART 1 CHAPTER 288</b>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<b>SUBCHAPTER B</b>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS DROUGHT CONTINGENCY PLANS
<b>RULE '288.20</b>	<b>Drought Contingency Plans for Municipal Uses by Public Water Suppliers</b>

(a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.

(1) Minimum requirements. Drought contingency plans must include the following minimum elements.

(A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. 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.

(B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.

(C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.

(D) 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.

(E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:

(i) reduction in available water supply up to a repeat of the drought of record;

(ii) water production or distribution system limitations;

(iii) supply source contamination; or

(iv) system outage due to the failure or damage of major water system components (e.g., pumps).

(F) 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 subparagraph are not enforceable.

(G) 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:

(i) curtailment of non-essential water uses; and

(ii) utilization of alternative water sources and/or alternative delivery mechanisms 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.).

(H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.

(I) The drought contingency plan must include procedures for granting variances to the plan.

(J) The drought contingency plan must include procedures for the enforcement of mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.

(2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.

(3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.

(b) A wholesale or retail 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 retail 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 the adoption or revision of the regional water plan.

**ENVIRONMENTAL QUALITY**

**PART 1 CHAPTER 288  
SUBCHAPTER B**

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
WATER CONSERVATION PLANS, DROUGHT  
CONTINGENCY PLANS, GUIDELINES AND  
REQUIREMENTS DROUGHT CONTINGENCY PLANS  
Drought Contingency Plans for Wholesale  
Water Suppliers**

**RULE 288.22**

(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



## City Council Meeting

**Item Number:** 24  
**Meeting Date:** September 14, 2021  
**To:** City Council / City Manager  
**From:** Carl Craigo, Director  
**Subject:** AN ORDINANCE AMENDING THE CITY OF MIDLAND'S DROUGHT CONTINGENCY PLAN; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF FIVE HUNDRED DOLLARS (\$500.00); AND ORDERING PUBLICATION (DISTRICT: ALL) (UTILITIES)

---

**Purpose:**

An Ordinance Amending the City of Midland's Drought Contingency Plan (9310)

**Recommended City Council Action:**

Approve

**Fiscal Impact:**

The water rates will increase during stage 3 and 4 for consumption of water above 2000 gallons. Stage 3 would be 20% and Stage 4 would be 40%.

**Discussion:**

The current drought contingency plan was approved by Council on 8/26/2014 as ordinance 9310. This amendment provides information required by the TCEQ on possible future wholesale water customers for the City to acquire our bed and banks permit for the discharge of water from the Water Reclamation Facility. Stage 3 and Stage 4 drought response stages will change to increase rates above 2000 gallons of consumption by 20% and 40% respectively. Stage 3 is a severe water storage and stage 4 is a critical water storage.

*Robert Patrick*

---

City Manager's Office

**City of Midland**

**Water Use Permit No. 13476**

Accounting plan Excel file available upon request

October 20, 2021

Contact Mr. Chris Kozlowski at (512) 239-1801

**City of Midland**  
**Indirect Reuse Accounting Plan**  
**Water Use Permit No. 13476**

**Background**

Water Use Permit No. 13476 authorizes the City of Midland (the “City”) to use the bed and banks of Midland Draw to transport the current and future groundwater and surface water based treated effluent return flows discharged from the Midland Water Reclamation Facility (WRF) and subsequently divert and reuse up to 23,500 acre-feet (less losses) per year of these return flows for municipal, mining, and industrial uses in Midland County. The purpose of this accounting plan is to track the daily return flow discharges and diversions for compliance with the terms and conditions of Permit No. 13476.

The authorized 20.1 mile diversion reach of Midland Draw, beginning at the discharge point of the WRF and ending at the confluence with the Johnson Draw, is highlighted yellow in **Figure 1**. Carriage losses from the discharge location to the end of the authorized diversion reach are assumed to be 82% and a travel time of 1-day is assumed for all calculations.



**Figure 1. Map of the diversion reach of the Midland Draw southeast of Midland.**

The treated wastewater return flow originates from surface water and groundwater raw water supply sources. This accounting plan tracks the volume of the groundwater and surface water sourced return flows available for diversion at the beginning and end of the authorized diversion reach.

Source water of the treated effluent consists of the following:

- Groundwater from the City’s T-Bar Ranch/Clearwater, Airport, and Paul Davis Well Fields.
- Surface Water and Groundwater Purchased from the Colorado River Municipal Water District (CRMWD)
  - O.H. Ivie Reservoir (TCEQ Permit 3676)
  - Lake E.V. Spence (CoA 14-1008)
  - Lake J.B. Thomas (CoA 14-1002)
  - Moss Creek Lake (CoA 14-1018)
  - Pyote, Ward County, and Martin County well fields

The Accounting Plan tracks the source of the treated wastewater water effluent discharged using the source(s) of the previous day raw water supply. The calculations assume the proportion of the previous day’s raw water supply sources are equal to the proportion of the current day’s treated wastewater effluent by source. Return flows sourced from separate groundwater sources are combined in the return flow accounting. Return flows sourced from surface water are tracked from O.H. Ivie Reservoir and the combined supplies from E.V. Spence, J.B. Thomas, and Moss Creek. These reservoir sources are combined because the CRMWD combines these three supply sources in the meter data provided to the City.

Specific points of diversions are not authorized under Permit No. 13476. Therefore, the accounting plan assumes diversions occur at the end of the authorized diversion reach. When Permit No. 13476 is amended to include specific points of diversion within the authorized diversion reach, the accounting plan will be updated by the City to account for carriage losses to the new point of diversion and calculate available return flow at the new point of diversion.

### ***User Instructions***

The Accounting Plan is to be maintained on a daily basis and stored in the City’s electronic file system. At the beginning of the calendar year, the user will need to make a copy of the previous year accounting plan spreadsheet and delete all input data from the previous year. The user must then enter the current year into cell N11 in the “Instructions & Constants”.

Daily raw water supply and treated effluent discharge data should then be entered in the “Accounting” sheet of the Accounting Plan. The user will need to enter the daily data for December 30th and 31st from the previous year in the “Accounting” sheet to account for the assumed 1-day lag from raw water delivery to discharge of treated wastewater effluent and the

assumed 1-day travel time between the WRF discharge location and the end of the authorized diversion reach. The user should not modify any formulas contained in the Accounting Plan.

## ***Accounting Plan Spreadsheet***

### **Organization of Spreadsheet**

The Accounting Plan spreadsheet contains four separate tabs to organize input data, calculations, and monthly summaries. The following are descriptions of each tab and columns included in the Accounting Plan.

- **Instructions & Constants** – This tab provides background information, user instructions, and constants applied in calculating carriage losses and travel times.
- **Summary Table (ac-ft)** – This tab provides a summary of monthly discharges and diversions in acre-feet.
- **Summary Table (MG)** – This tab provides a summary of monthly discharges and diversions in millions of gallons.
- **Accounting** – This tab contains daily user input and calculations for tracking treated wastewater return flows.

### **INSTRUCTIONS TAB**

**Cell N11: Accounting Year** – Location for the user to input the accounting year. It is imperative that the user input a value because logic pertaining to dates and leap years depends upon this value.

### **SUMMARY TABLE TABS**

**Columns B and C: Month** – This is the month of the year.

**Column D: Total WRF Discharge** – The monthly sum of water discharged from the WRF and returned to Midland Draw.

**Column E: Treated Effluent Return Flow Diversion** – The monthly sum of return flow diversions.

**Column F: Total Return Flow at End of Reach** – The monthly sum of treated effluent available for diversion at the end of the reach after carriage losses.

**Column G: Groundwater Sourced Return Flow at End of Reach** – The monthly sum of return flow from groundwater sources available for diversion at the end of the reach after carriage losses.

**Column H: E. V. Spence & J. B. Thomas Reservoirs & Moss Creek Lake Sourced Return Flow Available at End of Reach** – The monthly sum of return flow sourced from State water

(surface water) at E. V. Spence and J. B. Thomas reservoirs, and Moss Creek Lake available for diversion at the end of the reach after carriage losses.

**Column I: O. H. Ivie Reservoir Sourced Return Flow Available at End of Reach** – The monthly sum of return flow sourced from State water (surface water) at O. H. Ivie Reservoir available for diversion at the end of the reach after carriage losses.

## **ACCOUNTING TAB**

**Column A: Date (mm/dd/yyyy)** – This column will automatically be populated with the date once the user enters the accounting year in the Instructions Tab.

**Column B: Month** – This is the numerical month of the year.

**Column C: Total Raw Water Supply (MG)** – This is the sum of daily raw water supplies from Columns D-H.

**Columns D-G: Raw Water Supply by Source (MG)** – These columns contain the daily volume of raw water supply from each source, input by the user.

**Column H: Total Return Flow (MG)** – This column contains the daily volume of treated wastewater return flow discharged into Midland Draw, input by the user.

**Columns I-K: Return Flow by Source (MG)** – These columns calculate WRF discharge from each source, distributed based on the previous day's ratio of raw water supplies.

**Column L: Total Available Return Flow at End of Reach Before Diversion (MG)** – This column calculates the sum daily volume of treated return flows from all sources at the end of the reach after calculated carriage losses that is available for diversion.

**Column M: Total Diversion at End of Reach (MG)** – This column contains the daily diversion at the end of the reach, input by the user. Conditional formatting indicates if an input value is above the volume available for diversion and is invalid.

**Column N-P: Diversion at End of Reach (MG)** – These columns calculate the diversion volume by source.

**Column Q: Total Available Return Flow at End of Reach After Diversion (MG)** – This column contains the daily volume of treated return flows from all sources at the end of the reach after diversions and calculated carriage losses.

**Column R-T: Return Flow at End of Reach by Source (MG)** – These columns calculate available return flow by source after diversion at the end of the authorized diversion reach after accounting for carriage losses.

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*

August 18, 2021

Mr. Zack Stein  
HDR, Inc  
4401 West Gate Blvd., Suite 400  
Austin, Texas 78745

**VIA-EMAIL**

RE: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

Dear Mr. Stein:

This acknowledges receipt, on July 28, 2021, of the applicant's request for a 60-day extension of time to respond to the Texas Commission on Environmental Quality request for information letter, dated July 26, 2021.

A 60-day extension is granted until October 25, 2021, and after that date the application will be returned pursuant to Title 30 Texas Administrative Code § 281.19. No further extensions will be granted associated with this request for information.

If you have any questions concerning this matter, please contact Mr. Bert Galvan via e-mail at [humberto.galvan@tceq.texas.gov](mailto:humberto.galvan@tceq.texas.gov) or by telephone at (512) 239-4013.

Sincerely,

A handwritten signature in cursive script that reads "J. Brooke McGregor".

Brooke McGregor, Manager  
Water Rights Permitting and Availability Section  
Water Availability Division

BM/bg

## Humberto Galvan

---

**From:** Stein, Zachary [REDACTED]  
**Sent:** Wednesday, July 28, 2021 1:55 PM  
**To:** Humberto Galvan  
**Subject:** RE: City of Midland App No. 13476 Request For Information

Mr. Galvan,

Pursuant to our phone conversation yesterday, I have met with the City and discussed the items included in the RFI. As it turns out, the City is currently in the process of updating their WCP and DCP for wholesale customers and plans to make the following updates to satisfy the wholesale requirements. Will you please confirm these changes will satisfy the items 1a, 2, and 3 of the RFI.

### DCP Updates

1. Requirement that pro rata provisions be included in wholesale contracts in accordance with §11.039 of the Texas Water Code.
2. Requirement that the City notify the TCEQ within 5 business days of the implementation of any mandatory provision of the DCP.

### WCP Updates

1. Confirmation that metering devices have an accuracy of +/- 5% be used to divert water from source of supply.
2. Requirement that wholesale contracts must require wholesale purchasers to formulate WCPs.

Lastly, the City is requesting a 60 day extension of the RFI deadline to accommodate the WCP and DCP adoption process.

Thanks and I apologize for not including Jennifer in the email, but I do not have her address.

-Zach

**ZACH STEIN** P.E.  
M 830.534.2183

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

## Hal Bailey

---

**From:** Humberto Galvan  
**Sent:** Thursday, October 21, 2021 7:39 AM  
**To:** Hal Bailey  
**Cc:** Chris Kozlowski  
**Subject:** FW: City of Midland App No. 13476 Request For Information

---

**From:** Humberto Galvan <[Humberto.Galvan@tceq.texas.gov](mailto:Humberto.Galvan@tceq.texas.gov)>  
**Sent:** Monday, July 26, 2021 12:40 PM  
**To:** Stein, Zachary [REDACTED]  
**Subject:** City of Midland App No. 13476 Request For Information

**CAUTION: [EXTERNAL]** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Stein,

Please see the attached letter for the City of Midland application No. 13476

Best regards,  
Bert Galvan, Work Leader  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section  
(512) 239-4013

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*

July 26, 2021

Mr. Zack Stein  
HDR, Inc  
4401 West Gate Blvd., Suite 400  
Austin, Texas 78745

**VIA-EMAIL**

RE: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

Dear Mr. Stein:

Additional information is needed to complete the technical review of the referenced application.

1. Provide additional information concerning the submitted water conservation plan for municipal use to comply with Title 30 Texas Administrative Code § 288.2.
  - a. Confirm that the method(s) and/or device(s) used to measure and account for the amount of water diverted from the source of supply, described in Section II B. 3. of the water conservation plan is within an accuracy of plus or minus 5.0%. Staff recognizes that this section of the water conservation plan indicates a pump will be used; however, information about the pump's accuracy is not included in this section.
  - b. Provide data or information that supports the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan, evaluates conservation as an alternative to the proposed appropriation, and evaluates any other feasible alternative to new water development.
2. Provide a completed Water Conservation Plan for Wholesale Public Water Suppliers (TCEQ Form no.- 20162) as referenced in Worksheet 6.0 Water Conservation/Drought Contingency Plans.
3. Provide a completed Drought Contingency Plan for Wholesale Public Water Suppliers (TCEQ Form no.- 20193) as referenced in Worksheet 6.0 Water Conservation/Drought Contingency Plans.
4. Provide an accounting plan that demonstrates compliance with the terms and conditions of any permit granted for this application. The plan must include, at minimum, the amount of discharged return flows and the amount of diversion at any point(s) within the diversion reach.

Mr. Zack Stein  
Application No. 13476  
July 26, 2021  
Page 2 of 2

Please provide the requested information by August 25, 2021 or the application may be returned pursuant to 30 Texas Administrative Code § 281.19. Alternatively, you may have the question of the necessity of the requested data (or the sufficiency of the information already submitted) referred to the commission for a decision. To be considered, a request for a referral must be provided by August 25, 2021.

If you have any questions concerning this matter please contact me via e-mail at [humberto.galvan@tceq.texas.gov](mailto:humberto.galvan@tceq.texas.gov) or by telephone at (512) 239-4013.

Sincerely,

A handwritten signature in black ink, appearing to read "Bert Galvan". The signature is fluid and cursive, with the first letter of each word being capitalized and prominent.

Bert Galvan, Work Leader  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

# TCEQ Interoffice Memorandum

TO: Office of the Chief Clerk  
Texas Commission on Environmental Quality

THRU:  Chris Kozlowski, Team Leader  
Water Rights Permitting Team

FROM: Bert Galvan, Work Leader  
Water Rights Permitting Team

DATE: June 22, 2018

SUBJECT: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

CHIEF CLERKS OFFICE

2018 JUN 22 AM 11:39

TEXAS  
COMMISSION  
ON ENVIRONMENTAL  
QUALITY

The application and partial fees were received on January 19, 2018. Additional information and fees were received on April 6, and June 4, 2018. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on June 22, 2018. Mailed notice of the application to downstream water right holders of record in the Colorado River Basin is required pursuant to Title 30 Texas Administrative Code § 295.161.

All fees have been paid and the application is sufficient for filing.

  
Bert Galvan, Work Leader  
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*

June 22, 2018

Mr. Zack Stein  
HDR, Inc  
4401 West Gate Blvd., Suite 400  
Austin, Texas 78745

RE: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

Dear Mr. Stein:

This acknowledges receipt on June 4, 2018 of additional fees in the amount of \$15,256.90 (Receipt Nos. M825333A, and M825333B, copies enclosed).

The application was declared administratively complete and filed with the Office of the Chief Clerk on June 22, 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 this matter please contact me via email at [humberto.galvan@tceq.texas.gov](mailto:humberto.galvan@tceq.texas.gov) or by telephone at (512) 239-4013.

Sincerely,

A handwritten signature in black ink, appearing to read "Bert Galvan".

Bert Galvan, Work Leader  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Enclosures



15-JUN-18 11:25 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>Card Auth.</u> <u>User Data</u>	<u>CC Type</u> <u>Tran Code</u> <u>Rec Code</u>	<u>Slip Key</u> <u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>	
WTR USE PERMITS	WUP	M825332	8986		BS00066526	05-JUN-18		
	WUP		060418	N	D8806276		-\$100.00	
WATER USE PERMITS		BOOS, RICKY DEAN	VHERNAND	CK				
	WUP	M825333A	518559		BS00066526	05-JUN-18		
	WUP	13476	060418	N	D8806276		-\$15,012.50	
WATER USE PERMITS		MIDLAND, CITY OF	VHERNAND	CK				
	WUP	M825358	6562		BS00066537	05-JUN-18		
	WUP	ADJ23415	060518	N	D8806287		-\$100.00	
WATER USE PERMITS		JARVIS, GLENN (LAW OFFICE)	VHERNAND	CK				
Total (Fee Code):								-\$15,212.50
Grand Total:								-\$15,212.50

*Just*



05-JUN-18 03:59 PM

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>Card Auth.</u> <u>User Data</u>	<u>CC Type</u> <u>Tran Code</u> <u>Rec Code</u>	<u>Slip Key</u> <u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
NOTICE FEES-WUP- WATER USE PERM	PTGU PTGU NOTICE FEES WUP WATER USE PERMITS	M825333B 13476 MIDLAND, CITY OF	518559 060418 VHERNAND	N CK	BS00066526 D8806276	05-JUN-18	-\$244.40
Total (Fee Code):							-\$244.40

Invoice Date	Invoice Number	Description	Invoice Amount		
05/07/2018	WRPERM 13476	Water Use Permit Fees PO# 20182052  \$15012.56 - WUP \$244.40 - pigu	\$15,256.90 PAID TO THE ORDER OF STATE COMPTROLLER TCEO 825333 3-4 18		
Vendor No. 1140	Vendor Name TEXAS COMMISSION ON ENVIRONMENTAL QUALITY		Check No. 00518559	Check Date 05/31/2018	Check Amount \$15,256.90



15-JUN-18 11:25 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>Card Auth.</u> <u>User Data</u>	<u>CC Type</u> <u>Tran Code</u> <u>Rec Code</u>	<u>Slip Key</u> <u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
WTR USE PERMITS	WUP	M825332	8986		BS00066526	05-JUN-18	-\$100.00
	WUP		060418	N	D8806276		
WATER USE PERMITS		BOOS, RICKY DEAN	VHERNAND	CK			
	WUP	M825333A	518559		BS00066526	05-JUN-18	-\$15,012.50
	WUP	13476	060418	N	D8806276		
WATER USE PERMITS		MIDLAND, CITY OF	VHERNAND	CK			
	WUP	M825358	6562		BS00066537	05-JUN-18	-\$100.00
	WUP	ADJ23415	060518	N	D8806287		
WATER USE PERMITS		JARVIS, GLENN (LAW OFFICE)	VHERNAND	CK			
Total (Fee Code):							-\$15,212.50
Grand Total:							-\$15,212.50

*Just*



05-JUN-18 03:59 PM

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>Card Auth.</u> <u>User Data</u>	<u>CC Type</u> <u>Tran Code</u> <u>Rec Code</u>	<u>Slip Key</u> <u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
NOTICE FEES-WUP- WATER USE PERM	PTGU PTGU	M825333B 13476	518559 060418		BS00066526 D8806276	05-JUN-18	-\$244.40
	NOTICE FEES WUP WATER USE PERMITS	MIDLAND, CITY OF	VHERNAND	CK			
Total (Fee Code):							-\$244.40

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 5, 2018

Mr. Zack Stein  
HDR, Inc  
4401 West Gate Blvd., Suite 400  
Austin, Texas 78745

**CERTIFIED MAIL**

9489 0090 0027 6009 3698 78

RE: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

Dear Mr. Stein:

This acknowledges receipt, on June 5, 2018, of the applicant's request for a 60-day extension of time to respond to the Texas Commission on Environmental Quality request for additional information letter, dated May 7, 2018.

A 60-day extension is granted until August 6, 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 this matter, please contact Bert Galvan via email at [humberto.galvan@tceq.texas.gov](mailto:humberto.galvan@tceq.texas.gov) or by telephone at (512) 239-4013.

Sincerely,

A handwritten signature in cursive script that reads "Lori Hamilton".

Lori Hamilton, Manager  
Water Rights Permitting and Availability Section  
Water Availability Division

## Humberto Galvan

---

**From:** Stein, Zachary [REDACTED]  
**Sent:** Tuesday, June 5, 2018 1:22 PM  
**To:** Humberto Galvan  
**Subject:** City of Midland Water Use Permit Application No. 13476 - Request for 60 Day Extension

Mr. Galvan,

The City of Midland would like to requests an extension to the May 7, 2018 administrative RFI. The City plans to remit the remaining fee of \$15,256.90 and requests an additional 60 days to approve the funds.

Thank you,

Zach

ZACH STEIN P.E.  
*Water Resources Engineer*

**HDR**  
4401 West Gate Blvd., Suite 400  
Austin, TX 78745  
P 512.498.4702  
[REDACTED]

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

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 7, 2018

Mr. Zack Stein  
HDR, Inc  
4401 West Gate Blvd., Suite 400  
Austin, Texas 78745

CERTIFIED MAIL

9489 0090 0027 6009 3699 46

RE: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

Dear Mr. Stein:

This acknowledges receipt of additional information on April 6, 2018.

Staff acknowledges applicant requests to convey Applicant's own return flows derived from privately owned groundwater and from surface water using the bed and banks of Midland Draw, tributary of Johnson Draw, tributary of Mustang Draw, tributary of Beals Creek, tributary of the Colorado River, Colorado River Basin.

Before the application can be declared administratively complete, pursuant to Title 30 Texas Administrative Code (TAC) §§ 295.132, and 295.133, remit fees in the amount of \$15,256.90 as described below. Please make check payable to the Texas Commission on Environmental Quality or the TCEQ.

Filing (10,001-250,000 ac-ft)	\$ 1,000.00
Recording	\$ 25.00
Use (\$1.00 x 14,100 ac-ft Surface Water)	\$ 14,100.00*
Notice (\$0.94 X 260 downstream water right holders)	\$ 244.40*
<b>Total Fees</b>	<b>\$ 15,369.40</b>
<b>Fees Received</b>	<b>\$ 112.50</b>
<b>Fees Due</b>	<b>\$ 15,256.90</b>

\*Pursuant to 30 TAC § 295.133(b), the applicant shall pay at least one-half of the use fee when the application is filed, and one-half within 180 days after notice is mailed to the applicant that the permit is granted.

\*Pursuant to 30 TAC § 295.161, mailed notice is to be sent to the 260 downstream water right holders of record in the Colorado River Basin.

Mr. Zack Stein  
Application No. 13476  
May 7, 2018  
Page 2 of 2

Please provide the requested fees by June 6, 2018, or the application will be returned pursuant to Title 30 Texas Administrative Code § 281.18.

Note that current fees will be recalculated if the percentage of return flows derived from surface water is different than the current estimate of 14,100 acre-feet.

If you have any questions concerning this matter, please contact me via email at [humberto.galvan@tceq.texas.gov](mailto:humberto.galvan@tceq.texas.gov) or by telephone at (512) 239-4013.

Sincerely,



Bert Galvan, Work Leader  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section



April 6, 2018

Mr. Bert Galvan, Project Manager,  
Texas Commission on Environmental Quality  
Water Rights Permitting Team  
Water Rights Permitting & Availability Section, MC 160  
P.O. Box 13087  
Austin, Texas 78711-3087

RECEIVED

APR 06 2018

WATER RIGHTS PERMITTING

**RE: Request for Information for Application No. 13476 by the City of Midland**

Dear Mr. Galvan:

This letter provides the response of the City of Midland to your March 14, 2018 request for additional information regarding Application No. 13476 for a water use permit to transport treated effluent using the bed and banks of Midland Draw. Each item of additional information requested is set out below in bold, followed by the City's response.

1. **Provide a completed Water Conservation Plan for Industrial Use that complies with Title 30 TAC § 288.3, or indicate whether the Applicant will not be the end-user and intends to contract the water for industrial purposes.**

At the current time, the City has not determined whether they will be the end-user for industrial purposes or if the water will be contracted. Per conversation with TCEQ staff, language will be included in the permit to indicate that should the City wish to be the end-user for industrial purposes, they will have 90 days to submit a water conservation plan from the time use begins.

2. **Provide a completed Water Conservation Plan for Mining Use that complies with Title 30 TAC § 288.3, or indicate whether the Applicant will not be the end-user and intends to contract the water for mining purposes.**

At the current time, the City has not determined whether they will be the end-user for mining purposes or if the water will be contracted. Per conversation with TCEQ staff, language will be included in the permit to indicate that should the City wish to be the end-user for mining purposes, they will have 90 days to submit a water conservation plan from the time use begins.

3. **Provide written evidence that Mr. Jerry F. Morales is authorized to sign the application of the City of Midland, pursuant to 30 TAC § 295.14(5).**

As mayor, Jerry Morales is authorized to sign the application under Section 13 of the City's Charter<sup>1</sup>. Specifically, see the bolded text in the following excerpt of the City Charter for Midland, Texas.

<sup>1</sup> <https://www.midlandtexas.gov/345/City-Charter>

*[Sec. 13. Duties of the Mayor. The mayor of the City of Midland shall preside over the meetings of the city council and perform such other duties consistent with the office as may be imposed upon him by this Charter and ordinances and resolutions passed in pursuance hereof. He may participate in the discussion of all matters coming before the council and shall be entitled to vote upon all matters considered by the council, but shall have no veto power. He shall sign all contracts and conveyances made or entered into by the city and all bonds issued under the provisions of this Charter, unless some other officer or agent of the city is designated and expressly authorized to do so by the city council, and shall be the chief executive officer of the city. He shall be recognized as the official head of the city by the courts for the purpose of serving civil process, by the governor for the purpose of enforcing military law, and for all ceremonial purposes. In times of danger or emergency, the mayor may with the consent of the city council take command of the police and govern the city by proclamation and maintain order and enforce all laws. (Election - 4/1/75)]*

4. Remit fees in the amount of \$15,256.90 as described below.

Filing (10,001-250,000 acft)	\$ 1,000.00
Recording	\$ 25.00
Use (\$1.00 x 14,100 ac-ft Surface Water)	\$ 14,100.00
Notice (\$0.94 Water Right Holders X 260)	\$ 244.40
<u>Total Fees</u>	<u>\$ 15,369.40</u>
<u>Fees Received</u>	<u>\$ 112.50</u>
Fees Due	\$ 15,256.90

The fees requested in Item #4 are those required for a new appropriation of State water. The city does **not** seek a new appropriation of state water. The City is only requesting the authorization to use the bed and banks of Midland Draw to transport City owned treated effluent. Additionally, treated effluent has not been historically discharged by the City into Midland Draw, the City is not requesting on-channel storage, and no existing water right holders are present in the requested diversion reach; therefore, the City does not anticipate notice to water right holders in the basin to be necessary. As a result, the City anticipates that the fees submitted with the application in the amount of \$112.50 for a bed and banks application are sufficient.

Sincerely,



Zach Stein, PE

CONSULTANT FOR THE CITY OF MIDLAND

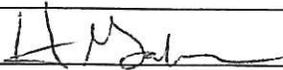
**Texas Commission on Environmental Quality  
TELEPHONE MEMO TO THE FILE**

Call to: TCEQ Staff Bert Galvan	Call from: Mr. Zack Stein (512) 498-4702
Date: 3/20/18	Project No: City of Midland Application No. 13476

*Information for File follows:*

Mr. Zack Stein asked for clarification on question No. 3 and 4 of the RFI sent to applicant on March 14, 2018. He will submit an email RFI response and address his concerns about these two questions within.

Signed



Bryan W. Shaw, Ph.D., P.E., *Chairman*  
Toby Baker, *Commissioner*  
Jon Niermann, *Commissioner*  
Richard A. Hyde, P.E., *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

March 14, 2018

Mr. Zack Stein  
HDR, Inc  
4401 West Gate Blvd., Suite 400  
Austin, Texas 78745

**CERTIFIED MAIL**

9489 0090 0027 6009 5202 62

RE: City of Midland  
WRPERM 13476  
CN600246813, RN110118452  
Application No. 13476 for a Water Use Permit  
Texas Water Code §§ 11.121, 11.042, Requiring Limited Mailed Notice  
Midland Draw, Colorado River Basin  
Midland County

Dear Mr. Stein:

This acknowledges receipt, on January 19, 2018, of the referenced application and partial fees in the amount of \$112.50 (Receipt No. M812716, copy enclosed).

Additional information and fees are required before the application can be declared administratively complete.

1. Provide a completed Water Conservation Plan for Industrial Use (TCEQ-10213 form, enclosed) that complies with Title 30 Texas Administrative Code (TAC) § 288.3, or indicate whether the Applicant will not be the end-user and intends to contract the water for industrial purposes.
2. Provide a completed Water Conservation Plan for Mining Use (TCEQ-10213 form, enclosed) that complies with Title 30 Texas Administrative Code (TAC) § 288.3, or indicate whether the Applicant will not be the end-user and intends to contract the water for mining purposes.
3. Provide written evidence that Mr. Jerry F. Morales is authorized to sign the application for the City of Midland, pursuant to 30 TAC § 295.14(5) which states:

If the applicant is a corporation, public district, county, municipality, or other corporate entity, the application shall be signed by a duly authorized official. Written evidence in the form of bylaws, charters, or resolutions which specify the authority of the official to take such action shall be submitted. A corporation may file a corporate affidavit as evidence of the official's authority to sign.

Mr. Zack Stein  
Application No. 13476  
March 14, 2018  
Page 2 of 2

4. Remit fees in the amount of **\$15,256.90** as described below. Please make check payable to the Texas Commission on Environmental Quality or the TCEQ.

Filing (10,001-250,000 ac-ft)	\$ 1,000.00
Recording	\$ 25.00
Use (\$1.00 x 14,100 ac-ft Surface Water)	\$ 14,100.00*
Notice (\$0.94 Water Right Holders X 260)	\$ 244.40
<u>Total Fees</u>	<u>\$ 15,369.40</u>
<u>Fees Received</u>	<u>\$ 112.50</u>
<b>Fees Due</b>	<b>\$ 15,256.90</b>

\*Pursuant to 30 TAC § 295.133(b), the applicant shall pay at least one-half of the use fee when the application is filed, and one-half within 180 days after notice is mailed to the applicant that the permit is granted.

Please provide the requested information and fees by April 13, 2018, or the application may be returned pursuant to 30 TAC § 281.18.

If you have any questions concerning this matter, please contact me via email at [humberto.galvan@tceq.texas.gov](mailto:humberto.galvan@tceq.texas.gov) or by telephone at (512) 239-4013.

Sincerely,



Bert Galvan, Work Leader  
Water Rights Permitting Team  
Water Rights Permitting and Availability Section

Enclosures





2. How was the surface water data and/or groundwater data provided above (B1) obtained?  
Master meter \_\_\_\_\_; Customer meter \_\_\_\_\_; Estimated \_\_\_\_\_; Other \_\_\_\_\_
3. Was purchased water raw or treated?  
If both, % raw \_\_\_\_\_; % treated \_\_\_\_\_ and Supplier(s): \_\_\_\_\_

*C. Industrial/Mining Information*

1. Major product(s) or service(s) produced by applicant:
2. North American Industry Classification System (NAICS):  
\_\_\_\_\_

**II. WATER USE AND CONSERVATION PRACTICES**

*A. Water Use in Industrial or Mining Processes*

<i>Production Use</i>	<i>% Groundwater</i>	<i>% Surface Water</i>	<i>% Saline Water</i>	<i>% Treated Water</i>	<i>Water Use (in acre-ft)</i>
Cooling, condensing, & refrigeration	_____	_____	_____	_____	_____
Processing, washing, transport	_____	_____	_____	_____	_____
Boiler feed	_____	_____	_____	_____	_____
Incorporated into product	_____	_____	_____	_____	_____
Other	_____	_____	_____	_____	_____

<i>Facility Use</i>	<i>% Groundwater</i>	<i>% Surface Water</i>	<i>% Saline Water</i>	<i>% Treated Water</i>	<i>Water Use (in acre-ft)</i>
Cooling tower(s)	_____	_____	_____	_____	_____
Pond(s)	_____	_____	_____	_____	_____
Once through	_____	_____	_____	_____	_____
Sanitary & drinking water	_____	_____	_____	_____	_____
Irrigation & dust control	_____	_____	_____	_____	_____

1. Was fresh water recirculated at this facility?  Yes  No
2. Provide a detailed description of how the water will be utilized in the industrial or mining process.
3. Estimate the quantity of water consumed in production and mining processes and is therefore unavailable for reuse, discharge or other means of disposal.
4. Monthly water demand for previous year (in acre-feet).

<i>Month</i>	<i>Diversion Amount</i>	<i>% of Water Returned (If Any)</i>	<i>Monthly Demand</i>
January	_____	_____	_____
February	_____	_____	_____
March	_____	_____	_____
April	_____	_____	_____
May	_____	_____	_____
June	_____	_____	_____
July	_____	_____	_____
August	_____	_____	_____
September	_____	_____	_____
October	_____	_____	_____
November	_____	_____	_____
December	_____	_____	_____
<b>Totals</b>	_____	_____	_____

5. Projected monthly water demand for next year (in acre-feet).

<i>Month</i>	<i>Diversion Amount</i>	<i>% of Water Returned</i>	<i>Monthly Demand</i>
January	_____	_____	_____
February	_____	_____	_____
March	_____	_____	_____
April	_____	_____	_____
May	_____	_____	_____
June	_____	_____	_____
July	_____	_____	_____
August	_____	_____	_____
September	_____	_____	_____
October	_____	_____	_____
November	_____	_____	_____
December	_____	_____	_____
<b>Totals</b>	_____	_____	_____

*B. Specific and Quantified Conservation Goal*

Water conservation goals for the industrial and mining sector are generally established either for (1) the amount of water recycled, (2) the amount of water reused, or (3) the amount of water not lost or consumed, and therefore is available for return flow.

1. Water conservation goal (water use efficiency measure)

Type of goal(s):

\_\_\_\_\_ % reused water

\_\_\_\_\_ % of water not consumed and therefore returned

\_\_\_\_\_ Other (specify)

2. Provide specific and quantified five-year and ten-year targets for water savings and the basis for development of such goals for this water use/facility.
3. Describe the methods and/or device(s) within an accuracy of plus or minus 5% used to measure and account for the amount of water diverted from the supply source.

4. Provide a description of the leak-detection and repair, and water-loss accounting measures used.
5. Equipment and/or process modifications used to improve water use efficiency.
6. Other water conservation techniques used.

***Best Management Practices***

*The Texas Water Developmental Board's (TWDB) Report 362 is the Water Conservation Best Management Practices (BMP) guide. The BMP Guide is a voluntary list of management practices that water users may implement in addition to the required components of Title 30, Texas Administrative Code, Chapter 288. The Best Management Practices Guide broken out by sector, including Agriculture, Commercial, and Institutional, Industrial, Municipal and Wholesale along with any new or revised BMP's can be found at the following link on the Texas Water Developments Board's website: <http://www.twdb.state.tx.us/conservation/bmps/index.asp>*

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact 512-239-3282.



December 19, 2017

Texas Commission on Environmental Quality  
Water Supply Division, Water Rights Permitting MC-160  
P.O. Box 13087  
Austin, Texas 78711-3087

RE: City of Midland Application to Use the Bed & Banks of Midland Draw

Water Rights Permitting Team:

On behalf of my client, the City of Midland, I am pleased to submit the following application package requesting authorization to use the Bed and Banks of Midland Draw to transport treated effluent. The application package includes one original and six copies and is divided into the following sections for organization and ease of review. These sections are as follows:

- Tab A – Administrative Checklist
- Tab B – Technical Information Report
- Tab C – Supplemental Technical Document
- Tab D – TPDES Permit
- Tab E – Monthly WWTP Discharge Data (Supplement to Worksheet 4.0)
- Tab F – USGS Topographic Map of Discharge Point and Diversion Reach
- Tab G – Drought Contingency Plan including Adoption Ordinance
- Tab H – Water Conservation Plan including Adoption Resolution

Finally, I have included a check for \$112.50 in payment of the water rights application fees.

Please let me know if we can provide additional information or assistance. The City of Midland and I look forward to working with the Commission on this permit application and thank you for your time and cooperation on this important project.

Sincerely,

Zachary Stein, PE  
ENGINEERING CONSULTANT FOR THE CITY OF MIDLAND

RECEIVED  
2018 JAN 19 10:30 AM  
WATER AVAILABILITY DIV.



# 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): City of Midland

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)
- 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) 239-4691.**

## 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."

The City of Midland's Water Pollution Control No. 1 Wastewater Treatment Facilities provides

primary treatment and effluent is disposed of by irrigation on City owned pasture and cultivated

land. The City plans to upgrade the treatment facility to provide secondary treatment and

discharge up to 21 mgd of the treated effluent into Midland Draw. The City wishes to use the bed

and banks of Midland Draw to transport the treated effluent for diversion and use downstream.

**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?

City of Midland

*(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 : CN600246813 ( 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: Jerry Morales

Title: Mayor

Have you provided written evidence meeting the signatory requirements in 30 TAC § 295.14, as an attachment to this application? N/A

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: Jerry Morales

Mailing Address: P.O. Box 1152

City: Midland

State: TX

ZIP Code: 79702

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 checked="" type="checkbox"/> City Government |
| <input type="checkbox"/> Other Government   | <input type="checkbox"/> Other _____                |

For Corporations or Limited Partnerships, provide:

State Franchise Tax ID Number: \_\_\_\_\_ SOS Charter (filing) Number: \_\_\_\_\_

### 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: Zach Stein

Title: Water Resources Engineer

Organization Name: HDR

Mailing Address: 4401 West Gate Blvd

City: Austin

State: TX

ZIP Code: 78745

Phone No.: 512-498-4702

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:

Title:

Organization Name:

Mailing Address:

City:

State:

ZIP Code:

Phone No.:

Extension:

Fax No.:

E-mail Address:

**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) 239-4691, 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 N/A**

**6. SIGNATURE PAGE (Instructions, Page. 11)**

Applicant:

I, Jerry Morales

Mayor

(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: \_\_\_\_\_

*Jerry F Morales*  
(Use blue ink)

Date: \_\_\_\_\_

*1/4/2018*

Subscribed and Sworn to before me by the said Jerry F. Morales

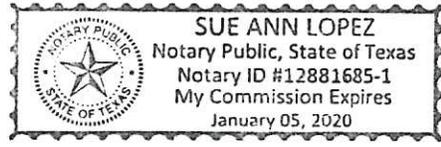
on this 4<sup>th</sup> day of January, 20 18.

My commission expires on the 5<sup>th</sup> day of January, 20 20.

*Sue Ann Lopez*  
Notary Public

[SEAL]

*Midland*  
County, Texas



**If the Application includes Co-Applicants, each Applicant and Co-Applicant must submit an original, separate signature page**

# TECHNICAL INFORMATION REPORT

## WATER RIGHTS PERMITTING

This Report is required for applications for new or amended water rights. Based on the Applicant's responses below, Applicants are directed to submit additional Worksheets (provided herein). A completed Administrative Information Report is also required for each application.

**Applicants are strongly encouraged to schedule a pre-application meeting with TCEQ Permitting Staff to discuss Applicant's needs and to confirm information necessary for an application prior to submitting such application. Please call Water Availability Division at (512) 239-4691 to schedule a meeting.** Applicant attended a pre-application meeting with TCEQ Staff for this Application? Y / N  (If yes, date : 23 JAN 2017).

### 1. New or Additional Appropriations of State Water. Texas Water Code (TWC) § 11.121 (Instructions, Page. 12)

**State Water is:** *The water of the ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state. TWC § 11.021.*

a. Applicant requests a new appropriation (diversion or impoundment) of State Water? Y / N

b. Applicant requests an amendment to an existing water right requesting an increase in the appropriation of State Water or an increase of the overall or maximum combined diversion rate? Y / N  (If yes, indicate the Certificate or Permit number: N/A)

*If Applicant answered yes to (a) or (b) above, does Applicant also wish to be considered for a term permit pursuant to TWC § 11.1381?*  Y / N

c. Applicant requests to extend an existing Term authorization or to make the right permanent? Y / N  (If yes, indicate the Term Certificate or Permit number: N/A)

*If Applicant answered yes to (a), (b) or (c), the following worksheets and documents are required:*

- **Worksheet 1.0 - Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir requested in the application)
- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for each diversion point and/or one worksheet for the upstream limit and one worksheet for the downstream limit of each diversion reach requested in the application)
- **Worksheet 5.0 - Environmental Information Worksheet**
- **Worksheet 6.0 - Water Conservation Information Worksheet**
- **Worksheet 7.0 - Accounting Plan Information Worksheet**
- **Worksheet 8.0 - Calculation of Fees**
- **Fees calculated on Worksheet 8.0 - see instructions Page. 34.**
- **Maps - See instructions Page. 15.**
- **Photographs - See instructions Page. 30.**

*Additionally, if Applicant wishes to submit an alternate source of water for the project/authorization, see Section 3, Page 3 for Bed and Banks Authorizations (Alternate sources may include groundwater, imported water, contract water or other sources).*

**Additional Documents and Worksheets may be required (see within).**

**2. Amendments to Water Rights. TWC § 11.122 (Instructions, Page. 12)**

This section should be completed if Applicant owns an existing water right and Applicant requests to amend the water right. *If Applicant is not currently the Owner of Record in the TCEQ Records, Applicant must submit a Change of Ownership Application (TCEQ-10204) prior to submitting the amendment Application or provide consent from the current owner to make the requested amendment. See instructions page. 6.*

Water Right (Certificate or Permit) number you are requesting to amend: N/A

Applicant requests to sever and combine existing water rights from one or more Permits or Certificates into another Permit or Certificate? **Y / N N/A** (if yes, complete chart below):

List of water rights to sever	Combine into this ONE water right
N/A	N/A

- a. Applicant requests an amendment to an existing water right to increase the amount of the appropriation of State Water (diversion and/or impoundment)? **Y / N N/A**

*If yes, application is a new appropriation for the increased amount, complete Section 1 of this Report (PAGE. 1) regarding New or Additional Appropriations of State Water.*

- b. Applicant requests to amend existing Term authorization to extend the term or make the water right permanent (remove conditions restricting water right to a term of years)? **Y / N N/A**

*If yes, application is a new appropriation for the entire amount, complete Section 1 of this Report (PAGE. 1) regarding New or Additional Appropriations of State Water.*

- c. Applicant requests an amendment to change the purpose or place of use or to add an additional purpose or place of use to an existing Permit or Certificate? **Y / N N/A**

*If yes, submit:*

- **Worksheet 1.0 - Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 1.2 - Notice: "Marshall Criteria"**

- d. Applicant requests to change: diversion point(s); or reach(es); or diversion rate? **Y / N N/A**

*If yes, submit: Worksheet 3.0 - Diversion Point Information Worksheet (submit one worksheet for each diversion point or one worksheet for the upstream limit and one worksheet for the downstream limit of each diversion reach)*

- e. Applicant requests amendment to add or modify an impoundment, reservoir, or dam? **Y / N N/A**

*If yes, submit: Worksheet 2.0 - Impoundment/Dam Information Worksheet (submit one worksheet for each impoundment or reservoir)*

- f. Other - Applicant requests to change any provision of an authorization not mentioned above? **Y / N N/A** *If yes, call the Water Availability Division at (512) 239-4691 to discuss.*

**Additionally, all amendments require:**

- **Worksheet 8.0 - Calculation of Fees; and Fees calculated - see instructions Page.34**
- **Maps - See instructions Page. 15.**
- **Additional Documents and Worksheets may be required (see within).**

### 3. Bed and Banks. TWC § 11.042 (Instructions, Page 13)

- a. Pursuant to contract, Applicant requests authorization to convey, stored or conserved water to the place of use or diversion point of purchaser(s) using the bed and banks of a watercourse? TWC § 11.042(a). Y/N

*If yes, submit a signed copy of the Water Supply Contract pursuant to 30 TAC §§ 295.101 and 297.101. Further, if the underlying Permit or Authorization upon which the Contract is based does not authorize Purchaser's requested Quantity, Purpose or Place of Use, or Purchaser's diversion point(s), then either:*

- 1. Purchaser must submit the worksheets required under Section 1 above with the Contract Water identified as an alternate source; or*
- 2. Seller must amend its underlying water right under Section 2.*

- b. Applicant requests to convey water imported into the state from a source located wholly outside the state using the bed and banks of a watercourse? TWC § 11.042(a-1). Y / N

*If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps and fees from the list below.*

- c. Applicant requests to convey Applicant's own return flows derived from privately owned groundwater using the bed and banks of a watercourse? TWC § 11.042(b). Y / N

*If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps, and fees from the list below.*

- d. Applicant requests to convey Applicant's own return flows derived from surface water using the bed and banks of a watercourse? TWC § 11.042(c). Y / N

*If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, Maps, and fees from the list below.*

***\*Please note, if Applicant requests the reuse of return flows belonging to others, the Applicant will need to submit the worksheets and documents under Section 1 above, as the application will be treated as a new appropriation subject to termination upon direct or indirect reuse by the return flow discharger/owner.***

- e. Applicant requests to convey water from any other source, other than (a)-(d) above, using the bed and banks of a watercourse? TWC § 11.042(c). Y / N

*If yes, submit: worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps, and fees from the list below.*

*Worksheets and information:*

- **Worksheet 1.0 - Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir owned by the applicant through which water will be conveyed or diverted)
- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for the downstream limit of each diversion reach for the proposed conveyances)
- **Worksheet 4.0 - Discharge Information Worksheet** (for each discharge point)
- **Worksheet 5.0 - Environmental Information Worksheet**
- **Worksheet 6.0 - Water Conservation Information Worksheet**
- **Worksheet 7.0 - Accounting Plan Information Worksheet**
- **Worksheet 8.0 - Calculation of Fees; and Fees calculated - see instructions Page. 34**
- **Maps - See instructions Page. 15.**
- **Additional Documents and Worksheets may be required (see within).**

**4. General Information, Response Required for all Water Right Applications (Instructions, Page 15)**

- a. Provide information describing how this application addresses a water supply need in a manner that is consistent with the state water plan or the applicable approved regional water plan for any area in which the proposed appropriation is located or, in the alternative, describe conditions that warrant a waiver of this requirement (*not required for applications to use groundwater-based return flows*). Include citations or page numbers for the State and Regional Water Plans, if applicable. Provide the information in the space below or submit a supplemental sheet entitled "Addendum Regarding the State and Regional Water Plans":

The requested authorization is not inconsistent with the State or Regional Water Plan.

---

The 2016 Region F Water Plan (Pg 5E-57 to 5E-61) shows the City of Midland as

---

having a supply need of 2,903 AFY in 2020 and increasing to 31,072 AFY in 2070.

---

The supply authorized by this requested application will go towards meeting this need

---

for the City of Midland.

---

- b. Did the Applicant perform its own Water Availability Analysis? Y / N N

*If the Applicant performed its own Water Availability Analysis, provide electronic copies of any modeling files and reports.*

- c. Does the application include required Maps? (Instructions Page. 15) Y / N Y

# WORKSHEET 1.0

## Quantity, Purpose and Place of Use

### 1. New Authorizations (Instructions, Page. 16)

Submit the following information regarding quantity, purpose and place of use for requests for new or additional appropriations of State Water or Bed and Banks authorizations:

Quantity (acre- feet) <i>(Include losses for Bed and Banks)</i>	State Water Source (River Basin) or Alternate Source <i>*each alternate source (and new appropriation based on return flows of others) also requires completion of Worksheet 4.0</i>	Purpose(s) of Use	Place(s) of Use <i>*requests to move state water out of basin also require completion of Worksheet 1.1 Interbasin Transfer</i>
23,500	Treated Effluent	Mun, Ind, Min	Midland County

23,500 Total amount of water (in acre-feet) to be used annually (*include losses for Bed and Banks applications*)

If the Purpose of Use is Agricultural/Irrigation for any amount of water, provide:

1. Location Information Regarding the Lands to be Irrigated

- i) Applicant proposes to irrigate a total of N/A acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of N/A acres in N/A County, TX.
- ii) Location of land to be irrigated: In the N/A Original Survey No. N/A, Abstract No. N/A.

***A copy of the deed(s) or other acceptable instrument describing the overall tract(s) with the recording information from the county records must be submitted. Applicant's name must match deeds.***

***If the Applicant is not currently the sole owner of the lands to be irrigated, Applicant must submit documentation evidencing consent or other documentation supporting Applicant's right to use the land described.***

***Water Right must be the appurtenant to the land irrigated and convey with the land conveyance. 30 TAC § 297.81.***

**2. Amendments - Purpose or Place of Use (Instructions, Page. 12)**

a. Complete this section for each requested amendment changing, adding, or removing Purpose(s) or Place(s) of Use, complete the following:

Quantity (acre-feet)	Existing Purpose(s) of Use	Proposed Purpose(s) of Use*	Existing Place(s) of Use	Proposed Place(s) of Use**

\*If the request is to add additional purpose(s) of use, include the existing and new purposes of use under "Proposed Purpose(s) of Use."

\*\*If the request is to add additional place(s) of use, include the existing and new places of use under "Proposed Place(s) of Use."

*Changes to the purpose of use in the Rio Grande Basin may require conversion. 30 TAC § 303.43.*

b. For any request which adds Agricultural purpose of use or changes the place of use for Agricultural rights, provide the following location information regarding the lands to be irrigated:

i) Applicant proposes to irrigate a total of N/A acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of N/A acres in N/A County, TX.

ii) Location of land to be irrigated: In the N/A Original Survey No. N/A, Abstract No. N/A.

***A copy of the deed(s) describing the overall tract(s) with the recording information from the county records must be submitted. Applicant's name must match deeds. If the Applicant is not currently the sole owner of the lands to be irrigated, Applicant must submit documentation evidencing consent or other legal right for Applicant to use the land described.***

***Water Rights for Irrigation may be appurtenant to the land irrigated and convey with the land unless reserved in the conveyance. 30 TAC § 297.81.***

c. Submit Worksheet 1.1, Interbasin Transfers, for any request to change the place of use which moves State Water to another river basin.

d. See Worksheet 1.2, Marshall Criteria, and submit if required.

e. See Worksheet 6.0, Water Conservation/Drought Contingency, and submit if required.

## WORKSHEET 3.0 DIVERSION POINT (OR DIVERSION REACH) INFORMATION

This worksheet **is required** for each diversion point or diversion reach. Submit one Worksheet 3.0 for **each** diversion point and two Worksheets for **each** diversion reach (one for the upstream limit and one for the downstream limit of each diversion reach).

*The numbering of any points or reach limits should be consistent throughout the application and on supplemental documents (e.g. maps).*

### 1. Diversion Information (Instructions, Page. 24)

a. This Worksheet is to add new (select 1 of 3 below):

1. \_\_\_\_\_ Diversion Point No.
2.  \_\_\_\_\_ Upstream Limit of Diversion Reach No.
3. \_\_\_\_\_ Downstream Limit of Diversion Reach No.

b. Maximum Rate of Diversion for **this new point**<sup>68</sup> \_\_\_\_\_ cfs (cubic feet per second)  
or <sup>30,521</sup> \_\_\_\_\_ gpm (gallons per minute)

c. Does this point share a diversion rate with other points? **Y / NY**  
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches*<sup>68</sup> \_\_\_\_\_ cfs or <sup>30,521</sup> \_\_\_\_\_ gpm

d. For amendments, is Applicant seeking to increase combined diversion rate? **Y / N / N/A**

*\*\* An increase in diversion rate is considered a new appropriation and would require completion of Section 1, New or Additional Appropriation of State Water.*

e. Check (✓) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
<input checked="" type="checkbox"/>	Directly from stream	Proposed
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional sheets if necessary)	

f. Based on the Application information provided, Staff will calculate the drainage area above the diversion point (or reach limit). If Applicant wishes to also calculate the drainage area, you may do so at their option.

Applicant has calculated the drainage area. **Y / N / N**

If yes, the drainage area is <sup>N/A</sup> \_\_\_\_\_ sq. miles.

*(If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application)*

## 2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): Midland Draw
- b. Zip Code: 79706
- c. Location of point: In the T&P RR CO Original Survey No. 38, Abstract No. 44, Midland County, Texas.

***A copy of the deed(s) with the recording information from the county records must be submitted describing tract(s) that include the diversion structure. For diversion reaches, the Commission cannot grant an Applicant access to property that the Applicant does not own or have consent or a legal right to access, the Applicant will be required to provide deeds, or consent, or other documents supporting a legal right to use the specific points when specific diversion points within the reach are utilized. Other documents may include, but are not limited to: a recorded easement, a land lease, a contract, or a citation to the Applicant's right to exercise eminent domain to acquire access.***

- d. Point is at:  
Latitude 31.997412°N, Longitude 102.016285°W.  
***Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places***
- e. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program): GIS
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38.
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

N/A

## WORKSHEET 3.0 DIVERSION POINT (OR DIVERSION REACH) INFORMATION

This worksheet is **required** for each diversion point or diversion reach. Submit one Worksheet 3.0 for **each** diversion point and two Worksheets for **each** diversion reach (one for the upstream limit and one for the downstream limit of each diversion reach).

*The numbering of any points or reach limits should be consistent throughout the application and on supplemental documents (e.g. maps).*

### 1. Diversion Information (Instructions, Page. 24)

- a. This Worksheet is to add new (select 1 of 3 below):
1. \_\_\_\_\_ Diversion Point No.
  2. \_\_\_\_\_ Upstream Limit of Diversion Reach No.
  3.  \_\_\_\_\_ Downstream Limit of Diversion Reach No.
- b. Maximum Rate of Diversion for **this new point**<sup>68</sup> \_\_\_\_\_ cfs (cubic feet per second) or <sup>30,521</sup> \_\_\_\_\_ gpm (gallons per minute)
- c. Does this point share a diversion rate with other points? **Y / NY**  
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches*<sup>68</sup> \_\_\_\_\_ cfs or <sup>30,521</sup> \_\_\_\_\_ gpm
- d. For amendments, is Applicant seeking to increase combined diversion rate? **Y / N N/A**

*\*\* An increase in diversion rate is considered a new appropriation and would require completion of Section 1, New or Additional Appropriation of State Water.*

- e. Check (✓) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
<input checked="" type="checkbox"/>	Directly from stream	Proposed
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional sheets if necessary)	

- f. Based on the Application information provided, Staff will calculate the drainage area above the diversion point (or reach limit). If Applicant wishes to also calculate the drainage area, you may do so at their option.

Applicant has calculated the drainage area. **Y / N N**

If yes, the drainage area is <sup>N/A</sup> \_\_\_\_\_ sq. miles.

*(If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application)*

## 2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): Midland Draw
- b. Zip Code: 79706
- c. Location of point: In the T&P RR CO \_\_\_\_\_ Original Survey No. 36, Abstract No. 9, Midland County, Texas.

***A copy of the deed(s) with the recording information from the county records must be submitted describing tract(s) that include the diversion structure. For diversion reaches, the Commission cannot grant an Applicant access to property that the Applicant does not own or have consent or a legal right to access, the Applicant will be required to provide deeds, or consent, or other documents supporting a legal right to use the specific points when specific diversion points within the reach are utilized. Other documents may include, but are not limited to: a recorded easement, a land lease, a contract, or a citation to the Applicant's right to exercise eminent domain to acquire access.***

- d. Point is at:  
Latitude 31.909041 °N, Longitude 101.768176 °W.  
***Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places***
- e. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program): GIS
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38.
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

N/A

## 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, Industrial, and Mining.
- b. Provide the amount of water that will be lost to transportation, evaporation, seepage, channel or other associated carriage losses <sup>82</sup>                      % and explain the method of calculation: See supplemental technical document

Is the source of the discharged water return flows? **Y / N<sup>Y</sup>** If yes, provide the following information:

1. The TPDES Permit Number(s). WQ00010223001 (attach a copy of the **current** TPDES permit(s))
2. Applicant is the owner/holder of each TPDES permit listed above? **Y / N Y**

*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 variable, surface water variable ?
  5. If any percentage is surface water, provide the base water right number(s) See supplemental tech document.
- c. Is the source of the water being discharged groundwater? **Y / N<sup>N</sup>** 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 None

## 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.**

**For water discharged at this location provide:**

- a. The amount of water that will be discharged at this point is 23,500 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 68 cfs or 30,521 gpm.
- c. Name of Watercourse as shown on Official USGS maps: Midland Draw
- d. Zip Code: 79706
- f. Location of point: In the T&P RR CO Original Survey No. 38, Abstract No. 44, Midland County, Texas.
- g. Point is at:  
Latitude 31.997412 °N, Longitude 102.016285 °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): GIS

**Map submitted must clearly identify each discharge point. See instructions Page. 15.**

# WORKSHEET 6.0

## Water Conservation/Drought Contingency Plans

This form is intended to assist applicants in determining whether a Water Conservation Plan and/or Drought Contingency Plans is required and to specify the requirements for plans.  
**Instructions, Page 31.**

*The TCEQ has developed guidance and model plans to help applicants prepare plans. Applicants may use the model plan with pertinent information filled in. For assistance submitting a plan call the Resource Protection Team (Water Conservation staff) at 512-239-4691, or e-mail [wras@tceq.texas.gov](mailto:wras@tceq.texas.gov). The model plans can also be downloaded from the TCEQ webpage. Please use the most up-to-date plan documents available on the webpage.*

### 1. Water Conservation Plans

- a. The following applications must include a completed Water Conservation Plan (30 TAC § 295.9) for each use specified in 30 TAC, Chapter 288 (municipal, industrial or mining, agriculture – including irrigation, wholesale):
1. Request for a new appropriation or use of State Water.
  2. Request to amend water right to increase appropriation of State Water.
  3. Request to amend water right to extend a term.
  4. Request to amend water right to change a place of use.  
*\*does not apply to a request to expand irrigation acreage to adjacent tracts.*
  5. Request to amend water right to change the purpose of use.  
*\*applicant need only address new uses.*
  6. Request for bed and banks under TWC § 11.042(c), when the source water is State Water  
*\*including return flows, contract water, or other State Water.*
- b. If Applicant is requesting any authorization in section (1)(a) above, indicate each use for which Applicant is submitting a Water Conservation Plan as an attachment:
1.  Municipal Use. See 30 TAC § 288.2. \*\*
  2.  Industrial or Mining Use. See 30 TAC § 288.3.
  3.  Agricultural Use, including irrigation. See 30 TAC § 288.4.
  4.  Wholesale Water Suppliers. See 30 TAC § 288.5. \*\*

**\*\*If Applicant is a water supplier, Applicant must also submit documentation of adoption of the plan. Documentation may include an ordinance, resolution, or tariff, etc. See 30 TAC §§ 288.2(a)(1)(J)(i) and 288.5(1)(H). Applicant has submitted such documentation with each water conservation plan? Y / N Y**

- c. Water conservation plans submitted with an application must also include data and information which: supports applicant's proposed use with consideration of the plan's water conservation goals; evaluates conservation as an alternative to the proposed

appropriation; and evaluates any other feasible alternative to new water development.  
See 30 TAC § 288.7.

Applicant has included this information in each applicable plan? Y / N N

## 2. Drought Contingency Plans

- a. A drought contingency plan is also required for the following entities if Applicant is requesting any of the authorizations in section (1) (a) above - indicate each that applies:
1.  Municipal Uses by public water suppliers. See 30 TAC § 288.20.
  2.  Irrigation Use/ Irrigation water suppliers. See 30 TAC § 288.21.
  3.  Wholesale Water Suppliers. See 30 TAC § 288.22.
- b. If Applicant must submit a plan under section 2(a) above, Applicant has also submitted documentation of adoption of drought contingency plan (*ordinance, resolution, or tariff, etc.* See 30 TAC § 288.30) Y / N Y

## WORKSHEET 8.0 CALCULATION OF FEES

This worksheet is for calculating required application fees. Applications are not Administratively Complete until all required fees are received. **Instructions, Page. 34**

### 1. NEW APPROPRIATION

	Description	Amount (\$)
<b>Filing Fee</b>	Circle fee correlating to the total amount of water* requested for any new appropriation and/or impoundment. Amount should match total on Worksheet 1, Section 1. Enter corresponding fee under <b>Amount (\$)</b> . <u>In Acre-Feet</u> a. Less than 100                      \$100.00 b. 100 - 5,000                         \$250.00 c. 5,001 - 10,000                     \$500.00 d. 10,001 - 250,000                 \$1,000.00 e. More than 250,000                \$2,000.00	
<b>Recording Fee</b>		\$25.00
<b>Agriculture Use Fee</b>	<i>Only for those with an Irrigation Use.</i> Multiply 50¢ x _____ Number of acres that will be irrigated with State Water. **	
<b>Use Fee</b>	<i>Required for all Use Types, excluding Irrigation Use.</i> Multiply \$1.00 x _____ Maximum annual diversion of State Water in acre-feet. **	
<b>Recreational Storage Fee</b>	<i>Only for those with Recreational Storage.</i> Multiply \$1.00 x _____ acre-feet of in-place Recreational Use State Water to be stored at normal max operating level.	
<b>Storage Fee</b>	<i>Only for those with Storage, excluding Recreational Storage.</i> Multiply 50¢ x _____ acre-feet of State Water to be stored at normal max operating level.	
<b>Mailed Notice</b>	Cost of mailed notice to all water rights in the basin. Contact Staff to determine the amount (512) 239-4691.	
<b>TOTAL</b>		\$

### 2. AMENDMENT OR SEVER AND COMBINE

	Description	Amount (\$)
<b>Filing Fee</b>	Amendment: \$100 <b>OR</b> Sever and Combine: \$100 x ___of water rights to combine	
<b>Recording Fee</b>		\$12.50
<b>Mailed Notice</b>	Additional notice fee to be determined once application is submitted.	
<b>TOTAL INCLUDED</b>		\$

### 3. BED AND BANKS

	Description	Amount (\$)
<b>Filing Fee</b>		\$100.00
<b>Recording Fee</b>		\$12.50
<b>Mailed Notice</b>	Additional notice fee to be determined once application is submitted.	
<b>TOTAL INCLUDED</b>		\$ \$112.50

# Memo

Date: December 21, 2017

Project: Midland Permitting Support – TCEQ Indirect Reuse Water Right Application

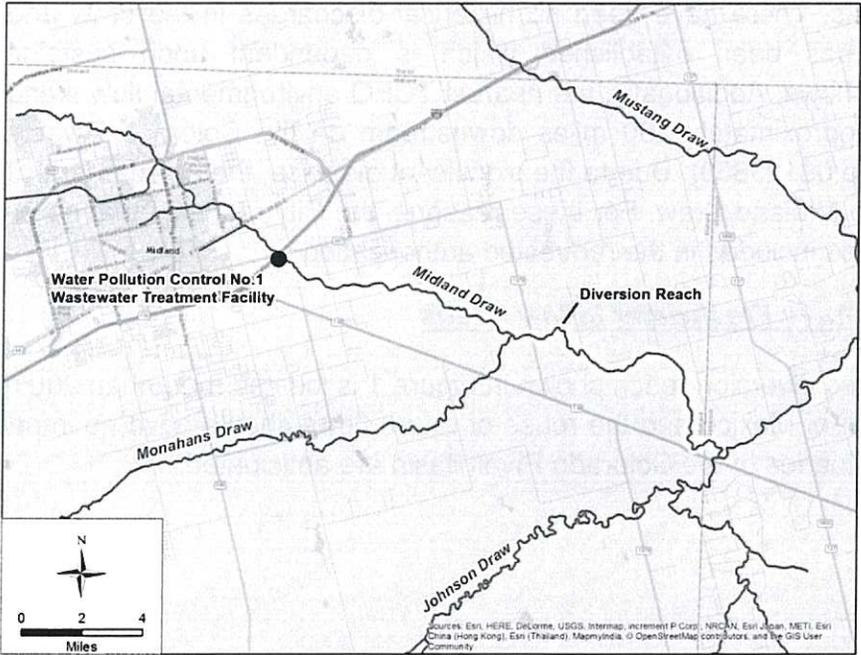
To: Texas Commission on Environmental Quality

From: Zach Stein, P.E.

**Subject: Supplemental Information for Application to Use the Bed and Banks of Midland Draw to Convey Treated Effluent**

The City of Midland currently discharges treated wastewater effluent from its Water Pollution Control No. 1 Wastewater Treatment Facility (WPCP) by land application via irrigation on City-owned pasture and cultivated land. The City plans to reduce and possibly cease land application of effluent and begin discharging the treated effluent into Midland Draw for subsequent indirect reuse diversion. The City wishes to obtain authorization to divert the treated effluent from the WPCP within a designated diversion reach on Midland Draw. The reach begins at the discharge point of the WPCP and ends 20.1 miles downstream at a point immediately upstream of the confluence with Johnson Draw (Figure 1).

**Figure 1. Map of Diversion Reach**



### **Requested Authorization**

The City does not seek a new appropriation of State water through this application. The City only requests the use of the bed and banks of Midland Draw to transport the treated effluent from the WPCP downstream for subsequent diversion and use for municipal, industrial and mining purposes. The City requests an authorized combined diversion rate of 68 cfs (44 MGD) and combined diversion amount of 23,500 acft per year (21 MGD) from one or more future diversion points within the requested diversion reach, shown in Figure 1.

Source water of the treated effluent consists of groundwater from the City's T-Bar Ranch/Clearwater, Airport, and Paul Davis Well Fields. Additionally, the City purchases water from the Colorado River Municipal Water District (CRMWD). The supplies from CRMWD primarily come from O.H. Ivie Reservoir (TCEQ Permit 3676), but can also include surface water from Lake E.V. Spence (CoA 14-1008), Lake J.B. Thomas (CoA 14-1002), and Moss Creek Lake (CoA 14-1018); as well as groundwater from the Pyote, Ward County, and Martin County well fields; and, direct reuse from the CRMWD raw water production facility in Big Spring. The City anticipates that the use of return flow originating from surface water supplies authorized under certificates of adjudications or TCEQ permits will adhere to the same designated use types associated with the source water permit.

### **Environmental Flow Requirements**

Midland Draw is an ephemeral stream and contains streamflow only during significant rainfall events. There have been no historical discharges in the draw and no aquatic ecosystem has been established which is dependent upon sustained base or subsistence flows. Additionally, the nearest TCEQ environmental flow standard location is located approximately 160 miles downstream on the Colorado River above Silver (USGS Gage 08123850). Due to the significant distance, the standards at Silver are not applicable to Midland Draw. For these reasons, the City requests that no environmental flow criteria be included in the requested authorization.

### **Bay and Estuary Freshwater Inflow Needs**

The requested diversion reach shown in Figure 1 is located more than 200 river miles from the Gulf of Mexico and the reuse of return flows should have no impacts to the bays and estuaries of the Colorado River Basin are anticipated.

**Average Estimated Travel Time (from Discharge to End Point of Diversion Reach)**

No historical recorded streamflow data is available for Midland Draw or nearby streams. As a result, the treated effluent discharge travel time from the beginning to the end of the 20.1 mile diversion reach is estimated to be one day.

**Estimated Carriage Losses**

Due to the climate and geomorphology of the region, significant levels of streamflow loss are expected to occur throughout the requested diversion reach. The TCEQ Colorado WAM does not include carriage loss estimates for Midland Draw or other nearby streams. In addition, the lack of historical streamflow data and hydrologic studies in the area make it difficult to accurately estimate carriage losses in the requested diversion reach. The City of Odessa discharges treated effluent into nearby Monahans Draw; however, the presence of several small reservoir impoundments immediately downstream make it difficult to determine how far the discharged effluent would travel before being completely consumed by carriage losses.

A 1960 Texas Board of Water Engineers Report<sup>1</sup> contains carriage loss estimates for a 17.9 mile reach of Tierra Blanca Creek located approximately 25 miles southwest of Amarillo. Tierra Blanca Creek appears to have similar climate and geomorphology characteristics as Midland Draw and the report calculates a loss rate of 82 percent for the 17.9 mile reach. As a result of the similar stream characteristics and reach lengths, it is assumed that 82 percent of the treated effluent will be lost throughout the 20.1 mile extent of the requested diversion reach.

After discharges have commenced and before any diversions of effluent occur, the City will consider verifying the estimated loss rate and travel time for the diversion reach. Should the loss rate or travel time estimates need to be adjusted based on field observations, the City will request an amendment to the permit and accounting plan to adjust the loss rate and travel time.

**Diversion Structure Screens**

The City will use screens on diversion structures to minimize entrainment and impingement of aquatic life. The City will evaluate and determine the appropriate screen size and flow through velocity to minimize entrainment and impingement during the design phase of the diversion facilities.

---

<sup>1</sup> Texas Board of Water Engineers, 1960, Channel gain and loss investigations, Texas streams, 1918–1958: Texas Board of Water Engineers Bulletin 5807–D, 6-7 p.

### **Accounting Plan**

An accounting plan is not being provided to TCEQ for review at this time, given the following:

- Return flows have never been discharged in the watercourse;
- No other water rights are present in the vicinity of the requested diversion reach;
- Environmental flow requirements are not applicable; and
- No diversion points have been identified within the diversion reach.

Before diversions begin in the designated diversion reach, the City can provide an accounting plan to TCEQ (if requested) to document discharges and diversions of treated effluent from its WPCP under the indirect reuse authorization occurring within the diversion reach.



PERMIT NO. WQ0010223001

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

This is a renewal of Permit No.  
WQ0010223001 issued  
November 18, 2004.

PERMIT TO DISCHARGE WASTES  
under provisions of Chapter 26  
of the Texas Water Code

City of Midland

whose mailing address is

P.O. Box 1152  
Midland, Texas 79702

Nature of Business Producing Waste: Domestic wastewater treatment operation, SIC Code 4952.

General Description and Location of Waste Disposal System:

Description: The Midland Water Pollution Control No. 1 Wastewater Treatment Facility consist of primary treatment and an activated sludge process plant with partial flow capacity using the conventional mode. Treatment units include micro screens, grit chambers, primary treatment, aeration basins, final clarifiers, and anaerobic sludge digesters. The facility is in operation. The permittee is authorized to dispose of treated domestic wastewater effluent at a daily average flow not to exceed 21.0 million gallons per day (MGD) via surface irrigation of approximately 1,950 acres of land for Irrigation Site #1 and approximately 3,100 acres of land for Irrigation Site #2 of non-public access pasture and cultivated land. The irrigation facility includes a total of 2 storage ponds at Site #1 with a surface area of approximately 45.2 acres and a capacity of approximately 271 acre-feet, and a total of 8 ponds at Site #2 with a surface area of approximately 220 acres and a capacity of approximately 2,575 acre-feet for storage of treated effluent prior to irrigation. Overall application rates to the irrigated land shall not exceed 4.0 acre-feet per year per acre irrigated for Irrigation Site 1 and shall not exceed 5.2 acre-feet per year per acre irrigated for Irrigation Site 2. The irrigated crops include a variety of agricultural crops and native grasses listed in Special Provisions No. 23 (cont).

**Location:** The wastewater treatment facility is located at 3600 Farm-to-Market Road 307, within Irrigation Site 1. The irrigation application area consists of two sites. Irrigation Site 1 consists of holding ponds and approximately 1,950 acres of farm land with the site centroid at 102 0' 17.935" west, 31 59' 13.184" north, located approximately 6,000 feet southeast of the intersection of Interstate Highway 20 and Farm-to-Market Road 307 in Midland County, Texas. Irrigation Site 2 consists of holding ponds and approximately 3,100 acres of irrigated farm land with the site centroid at 101 49' 55.506" west, 31 53' 13.876" north located approximately 13.5 miles southeast of the intersection of Interstate Highway 20 and Farm-to-Market Road 307 in Midland County, Texas in Sections 2, 3, 10, 11, 12, 13, 14 and 15, Block 37, TWP3-S of the T&P Railroad Company Survey in Midland County, Texas 79706. The southeast most section of Irrigation Site 2 extends into Glasscock County. The sludge disposal site consists of farm land and is designated as Areas F, G, I, J, K, L, M, O, and P; adjacent to the plant site approximately at the center part of Irrigation Site 1 in Midland County, Texas 79706. (See Attachment A and Attachment B.)

**Drainage Area:** The wastewater treatment facility and disposal site are located in the drainage basin of Colorado River Below Lake J. B. Thomas in Segment No. 1412 of the Colorado River Basin. No discharge of pollutants into water in the State is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight on **December 1, 2019**.

ISSUED DATE: February 17, 2015

  
For the Commission

**EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

**Conditions of the Permit: No discharge of pollutants into water in the State is authorized.**

**A. Effluent Limitations**

- Character: Treated Domestic Sewage Effluent
- Volume: Daily Average Flow – 21.0 MGD from the treatment system
- Quality: The following effluent limitations shall be required:

<u>Parameter</u>	<u>Effluent Concentrations</u>	
	(Not to Exceed)	
	<u>Daily Average</u> mg/l	<u>Single Grab</u> mg/l
Biochemical Oxygen Demand (5-day)	N/A	100

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

**B. Monitoring Requirements:**

<u>Parameter</u>	<u>Monitoring Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Totalizing Meter
Biochemical Oxygen Demand (5-day)	One/day	Grab
pH	One/month	Grab

Effluent monitoring shall be done after the final storage/holding pond and prior to land application. If the effluent is land applied directly from the treatment system, monitoring shall be done after the final treatment unit and prior to land application. These records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Commission for at least three years.

**STANDARD PERMIT CONDITIONS**

This permit is granted in accordance with the Texas Water Code and the rules and other Orders of the Commission and the laws of the State of Texas.

**DEFINITIONS**

All definitions in Section 26.001 of the Texas Water Code 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. 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.
- b. 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 1 million gallons per day or greater permitted flow.
- c. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

**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.

### 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 which 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 REQUIREMENTS

### 1. Monitoring Requirements

Monitoring results shall be collected 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 in accordance with 30 TAC §§ 319.4 - 319.12.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 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, records 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 Chapter 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, monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, and records of all data used to complete the application for this permit 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, or application. 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 determining compliance with permit requirements.

### 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. 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. 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 which exceeds any effluent limitation in the 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.
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).

## 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 which 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 Texas Water Code Section 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 Special Provisions section of this permit.
  - h. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 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).
3. Inspections and Entry
- a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 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 Texas Water Code Section 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 could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;
  - ii. 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 Texas Water Code § 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.

## 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 which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

## 7. Property Rights

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

## 8. 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.

## 9. 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.

## 10. 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 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 Texas Water Code § 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 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 which 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 percent 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 percent 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 percent 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 judgement 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. Facilities which 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 Permitting and Remediation 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 Chapter 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.

11. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Texas Health and Safety Code.

TCEQ Revision 06/2008

## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site or co-disposal landfill. **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 by the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge.**

**This provision authorizes the permittee to land apply Class B sludge on a portion of the property owned by the permittee. The application site consists of farm land totaling approximately 725 acres, designated as Areas F, G, I, J, K, L, M, O, and P, adjacent to the plant site approximately at the central part of Irrigation Site #1 (Attachment B).**

### 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 Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which 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 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, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 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 7) 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 Remediation 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 7) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed 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> (Milligrams per kilogram)*
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 shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 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. Below are the additional requirements necessary to meet the definition of a Class A sludge.

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 Section 312.82(a)(2)(A) for specific information.

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 degrees 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 percent.

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 Section 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 Section 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.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall 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 shall 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. 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 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. 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 Section 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 percent.

- 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 degrees Celsius. Volatile solids must be reduced by less than 17 percent 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 degrees Celsius. Volatile solids must be reduced by less than 15 percent 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 degrees 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 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees 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 percent 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 percent 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 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 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 - 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 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 weight basis).*

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

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A 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 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 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 the Management Requirements in accordance with 30 TAC Section 312.44.
3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop. In addition nitrogen application rates cannot exceed the values in Special Provision No. 22.
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 Section 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 B sludges, 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 Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 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 Section 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 Section 312.47(a)(4)(A)(ii) or 30 TAC Section 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 7) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TCEQ transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Commission on Environmental Quality registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. 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.
11. Level of pathogen reduction achieved (Class A or Class B).
12. 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.

13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.
16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.
17. 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 Chapter 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 Chapter 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 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 Section 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 7) 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 Remediation 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 7) and the Water Quality 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 7) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. 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.

**SPECIAL PROVISIONS:**

1. This permit is granted subject to the policy of the Commission to encourage the development of areawide waste collection, treatment and disposal systems. The Commission reserves the right to amend this permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an areawide 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 areawide 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.
2. 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 A facility must be operated by a chief operator or an operator holding a Category A 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.

3. The permittee shall maintain and operate the treatment facility in order to achieve optimum efficiency of treatment capability. This shall include required monitoring of effluent flow and quality as well as appropriate grounds and building maintenance.
4. The irrigated crops include a variety of agricultural crops and native grasses listed in Special Provisions No. 23. Overall application rates to the irrigated land shall not exceed 4.0 acre-feet per year per acre irrigated for Site No. 1 and shall not exceed 5.2 acre-feet per year per acre irrigated for Site No. 2. The permittee is responsible for providing equipment to determine application rates and maintaining accurate records of the volume of effluent applied. These records shall be made available for review by the Texas Commission on Environmental Quality and shall be maintained for at least three years.
5. Irrigation practices shall be designed and managed so as to prevent ponding of effluent or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area. Crops, turf grass, native grasses, cover crops, or other ground cover that is established shall be well maintained to provide for nutrient uptake by the crop and to prevent pathways for effluent surfacing. Tailwater control facilities shall be provided as necessary to prevent the discharge of any effluent from the irrigated land.
6. Effluent shall not be applied for irrigation during rainfall events, when the ground is frozen or saturated, or on land with no actively growing crop.

7. The permittee shall erect adequate signs stating that the irrigation water is from a non-potable water supply for any area where treated effluent is stored or where there exist hose bibs or faucets. Signs shall consist of a red slash superimposed over the international symbol for drinking water accompanied by the message "DO NOT DRINK THE WATER" in both English and Spanish. All piping transporting the effluent shall be clearly marked with these same signs.
8. Spray fixtures for the irrigation system shall be of such design that they cannot be operated by unauthorized personnel.
9. The permittee shall maintain a long term contract with the owner(s) of the land application site which is authorized for use in this permit, or own the land authorized for land application of treated effluent.
10. A wastewater treatment plant unit and land where surface irrigation using wastewater effluent occurs must be located a minimum horizontal distance of 150 feet from a private well and a minimum horizontal distance of 500 feet from a public water well site as provided by §290.41(c)(1)(C) of this title, spring, or other similar sources of public drinking water per 30 TAC Section §309.13(c).

A wastewater treatment plant unit and land where sludge application occurs must be located a minimum of 150 feet from a private water supply well and 500 feet from a public water supply well, intake, spring or similar source, public water supply treatment plant, or public water supply elevated or ground storage tank per 30 TAC Section §312.44(c)(2).

11. Facilities for the retention or storage of treated or untreated wastewater, such as constructed wetlands, ponds, and lagoons shall be adequately lined to control seepage. The liner shall meet the requirements in 30 TAC § 217.203, Design Criteria for Natural Treatment Facilities and 30 TAC § 309.13 d, related to unsuitable site characteristics.

The permittee shall furnish certification by a Texas Licensed Professional Engineer that the completed lining meets these requirements prior to use of the facilities. The certification shall be submitted to the TCEQ Regional Office (MC Region 7), Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, Water Quality Assessment Team (MC 150) and Wastewater Permitting Section (MC 148) of the Water Quality Division.

Existing effluent storage and holding ponds must meet liner requirements in place at the time of construction. However, if the Executive Director suspects a pond is leaking, the City may be required to perform corrective action to protect groundwater and surface water, including but not limited to reconstruction of the pond liner to meet the requirements of 30 TAC §217 and 30 TAC §309.13.

12. The permittee shall comply with the requirements of 30 TAC Section 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 Section 309.13(e). The permittee has submitted a consent letter from the Texas Department of Transportation to comply with 30 TAC Section 309.13(e)(3) (Attachment E).

13. Within 60 days of permit issuance, the permittee shall submit a Groundwater Monitoring Plan ("Plan") to the Water Quality Assessment Team (MC-150), for review, possible modification, and approval for each irrigation site, Irrigation Site #1 and Irrigation Site #2 (the Spraberry Site). Semi-annual monitoring consistent with previous permit requirements and practices must continue at the Spraberry Site until the Plan is approved. The Plan must be prepared by a Texas licensed professional geoscientist or professional engineer qualified to prepare this plan and shall provide, at a minimum, the following:
- (A) A description of the geology and hydrogeology of the facility and surrounding area, including groundwater gradient.
  - (B) A map showing the locations with identification of all proposed and existing monitor wells, and a table with details of well construction such as depth, top of casing elevation (or other measurement point), screen depth and length, and any other construction information such as the existence of a concrete pad and casing type.
  - (C) A groundwater sampling plan that at a minimum specifies in detail the following:
    - (1) Proposed well development procedures for any additional monitor wells prior to sampling, including the methods used in handling and disposal of development wastewater.
    - (2) A Quality Control/Quality Assurance (QA/QC) plan for sample collection and laboratory analysis, that covers sample withdrawal techniques and equipment, sample frequency, filtering, sample preservation, chain of custody, analytical methods, blanks, spikes, duplicates, detection levels and standards. The laboratory and analytical methods used must be NELAC accredited and comply with 30 TAC 25.
    - (3) Field sampling protocol, including field measurement for pH, conductivity, temperature, oxidation/reduction potential and static water level (measured in feet below ground surface) for each groundwater sample. Sample protocol should provide for the purging of groundwater contained in the well bore prior to sampling. Well purging of three well-bore volumes of liquid or purging until the above parameters have stabilized prior to sampling should be adequate to assure that a representative groundwater sample is collected. Sample protocol should also provide for the handling and disposal of purged well water.
    - (4) Laboratory analyses must be performed on a semi-annual basis for at least the following parameters:
      - (i) Sulfate (mg/L)
      - (ii) Total Dissolved Solids (TDS) (mg/L)
      - (iii) Chloride (mg/L)
      - (iv) Iron (mg/l)
      - (v) Ammonia (mg/l)
      - (vi) Nitrate as nitrogen (mg/L)
      - (vii) Total Nitrogen
      - (viii) Total phosphorous (mg/L)
      - (ix) Fecal coliform (cfu/100 mL)
      - (x) pH
      - (xi) Water table Elevations

- (D) Upon receipt of approval, or approval with modifications of the Plan by the Water Quality Assessment Team, the permittee shall implement the Plan in accordance with all schedules contained within the approved Plan and permit. Any future requests by the permittee to modify the groundwater monitoring program must be submitted in writing to the Water Quality Assessment (WQA) Team (MC-150) for review and possible approval. The Executive Director may initiate and require plan modifications to ensure protection of groundwater quality.
- (E) The permittee shall compile the results of the previous years' groundwater monitoring events in a report to be submitted to the Water Quality Assessment Team (WQA) (MC-150), TCEQ Region 7 – Midland, and the Glasscock County Groundwater Conservation District by February 1st of each year. The annual report must include copies of laboratory reports, field parameter data, purging data, a summary of the groundwater data with trend analysis using all available historical data (must include at least the last five years of data), annual potentiometric surface map, and a discussion of the results compared to all available historical data (must include at least the last five years of data). Groundwater data will not be available for Irrigation Site#1/Plant Site until commencement of monitoring activities at the site.
- (F) If any monitoring well is either dry or inaccessible during any sampling event, the permittee shall recheck that well every 30 days until an analytical sample can be obtained and the results of the sample reported. If a well remains inaccessible for a six-month period such that an analytical sample cannot be obtained, the permittee shall within 90 days either rework the well or remove the obstruction and obtain and report the required analytical sample. If the well remains dry for a six month period such that an analytical sample cannot be obtained, and the Executive Director determines that an additional well is needed, the permittee shall construct additional wells.
- (G) The permittee shall prevent surface water and wastewater effluent from directly entering the monitoring wells by the use of appropriate best management practices, both structural and non-structural. All parts of the wells including the wells heads, casings, and concrete pads shall remain in good condition with no visible cracks or defects.
14. Within 90 days of the date of permit issuance, the permittee shall submit a Nitrate Study Plan (Plan) to address possible impacts of nitrate contamination in the soil and groundwater at the Irrigation Site #2 (Spraberry Site) for review/revision and approval to the Water Quality Assessment (WQA) team (MC 150). The Plan shall include at a minimum the following: all or part of the Agronomist Scope of Work for Initial Review and Recommendations - Nitrate Impact to the Groundwater at the Spraberry Effluent Disposal Site dated May 31, 2011; a proposal to determine and reduce the potential for off-site migration of nitrate-impacted groundwater; an evaluation of the existing pond liners and the system of monitor wells surrounding these ponds; a timeline to achieve each individual task of the Plan; and any other assessment proposal to address nitrate contamination in the soil and groundwater.

The permittee shall submit quarterly progress reports to track the progress of the Plan submittal, approval, and implementation. The reports must be submitted to the Water Quality Assessment team (MC 150) and TCEQ Region 7 Office – Midland in accordance with the following schedule.

**PROGRESS REPORT DATES**

January 1  
April 1  
July 1  
October 1

The quarterly progress reports shall include a discussion of the interim requirements that have been completed at the time of the report and shall address the progress towards attaining the approved Plan measures.

Progress reports shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

The Executive Director may require additional plans and monitoring depending on the outcome of this assessment and collection of data in order assess and reduce nitrate contamination in groundwater found at the permitted site. The requirement to submit quarterly progress reports shall expire upon written approval from the Executive Director.

15. The permittee shall maintain a 200 foot buffer from all surface water features to effluent land application. Sludge shall not be applied within 200 feet of any surface water feature if not incorporated, and 33 feet of any surface water if incorporated into the soil per 30 TAC §312.44(c)(1). Additional required buffers from sludge application in accordance with 30 TAC §312.44(c)(2) 200 feet from a solution channel, sinkhole, or other conduit to groundwater; 750 feet from an established school, institution, business, or occupied residential structure; 50 feet from the public right-of-way and property boundaries; and 10 feet from an irrigation conveyance canal.
16. The permittee may continue the use of Pond A and Pond B at the Irrigation Site #1. The permittee shall install a measuring device and record the amount of wastewater diverted to both ponds on a frequency no less than once a month. The permittee shall inspect the ponds' leak detection/leachate collection system and record details and observations from the inspection on a frequency no less than once a month. The records must be maintained on site for at least five years and reported annually to the WQA Team (MC-150) and Region 7 Midland office. If collected data or other information suggests that the pond liners have been compromised or may be leaking, the pond liners shall be reconstructed and certified in accordance with 30 TAC §217 and 30 TAC §309.
17. The permittee shall obtain representative soil samples from the root zones of any areas irrigated with effluent or to which sludge is applied. Those areas of an application area that receive different application rates (sludge plus effluent versus effluent, for example) shall be sampled separately. Composite sampling techniques shall be used. Each composite sample shall represent no more than 80 acres with no less than 10 to 15 subsamples representing each composite sample. Subsamples shall be composited by like sampling depth, type of crop and soil type for analysis and reporting. Soil types are soils that have like topsoil or plow layer textures. These soils shall be sampled individually from 0 to 6 inches, 6 to 18 inches, and 18 to 30 inches below ground level. The permittee shall sample and analyze soils in December to February of each year except for row crops, which may be sampled between crop growing seasons. Soil samples shall be analyzed within 30 days of procurement.

The permittee shall provide annual soil analyses of the land application area according to the following table:

Parameter	Method	Minimum Analytical Level (MAL)	Reporting units
pH	2:1 (v/v) water to soil mixture		Reported to 0.1 pH units after calibration of pH meter
Electrical Conductivity	Obtained from the SAR water saturated paste extract	0.01	dS/m (same as mmho/cm)
Nitrate-nitrogen, ammonium-nitrogen	From a 1 N KCl soil extract	1	mg/kg (dry weight basis)
Total Kjeldahl Nitrogen (TKN)	For determination of Organic plus Ammonium Nitrogen. Procedures that use Mercury (Hg) are not acceptable.	20	mg/kg (dry weight basis)
Total Nitrogen	= TKN plus Nitrate-nitrogen		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Plant-available: Potassium (K) Calcium (Ca) Magnesium (Mg) Sodium (Na)	May be determined in the same Mehlich III extract with inductively coupled plasma	5 (K) 10 (Ca) 5 (Mg) 10 (Na) 1 (S)	mg/kg (dry weight basis)

Sulfur (S)			
Plant-available: Boron (B)	Hot water extraction (Bingham, F.T. 1982. Boron. p. 431-446. In: A.L. Page, et al. (ed.). Methods of Soil Analysis; Part 2. Agronomy Monogr. 9. 2nd ed. ASA and SSSA, Madison, WI.)	0.1	mg/kg (dry weight basis)
Plant-available: Copper (Cu) Iron (Fe) Manganese (Mn) Zinc (Zn)	Diethylene triamine pentaacetic acid (DTPA) extract (Lindsay, W.L. and W.A. Norvell. 1978. Development of a DTPA soil test for zinc, iron, manganese, and copper. Soil Sci. Soc. Amer. J. 42:421-428)	0.1 (Cu) 1.0 (Fe) 0.1 (Mn) 0.1 (Zn)	mg/kg (dry weight basis)
Water-soluble: Sodium (Na) Calcium (Ca) Magnesium (Mg)	Obtained from the SAR water saturated paste extract	1 (Na) 1 (Ca) 1 (Mg)	Water soluble constituents are reported in mg/L
Sodium Adsorption Ratio (SAR)	$SAR = \frac{Na}{\sqrt{\frac{(Ca + Mg)}{2}}}$		Express concentrations of Na, Ca and Mg in the water saturated paste extract in milliequivalents/liter (meq/L) to calculate the SAR. The SAR value is unitless.

			If the SAR is greater than 10, amendments (e.g., gypsum) shall be added to the soil to adjust the SAR to less than 10.
Amendment addition, e.g., gypsum	Recommendation from analytical laboratory		Report in short tons/acre in the year effected

A copy of this soil testing plan shall be provided to the analytical laboratory prior to sample analysis. The permittee shall submit the results of the annual soil sample analyses with copies of the laboratory reports with a map depicting any fields receiving effluent and/or sludge to the TCEQ Regional Office (MC Region 7), the Water Quality Assessment Team (MC 150) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, no later than the end of September of each sampling year. If wastewater is not applied in a particular year, the permittee shall notify the same TCEQ offices and indicate that wastewater has not been applied on the approved land irrigation sites during that year.

18. Permanent transmission lines shall be installed from the holding pond to each tract of land to be irrigated utilizing effluent from that pond.
19. Holding or storage ponds shall conform to the design criteria for stabilization ponds with regard to construction and levee design and shall maintain a minimum freeboard of two feet according to 30 TAC Chapter 217, Design Criteria for Wastewater Treatment Systems.
20. All sludge produced from primary and secondary units shall be stabilized in the anaerobic digesters at the facility site prior to final disposal.
21. Nitrogen Limit  
Hydraulic application rates for Irrigation Site #1 and Site #2 shall be limited by the permittee so that the total nitrogen applied is no more than the following. The amount applied shall be tabulated using Attachment F.

Crop	Crop Yield Goal	Maximum Nitrogen Application Rate w/o grazing, lbs N/ac	Maximum Nitrogen Application Rate w/ Grazing, lbs N/ac
Alfalfa	8 tons/ac	420	N/A
Cotton	2 bales/ac	100	N/A
Wheat Grain	41-50 bu/ac	75	60
Wheatgrass	3 tons/ac	150	150
Annual Ryegrass	3 tons/ac	140	140
Coastal Bermudagrass	3 cuttings/yr	300	160
Common Bermudagrass	3 cuttings/yr	210	100
Midland Bermudagrass	4 tons/ac	200	N/A

Haygrazer (Sorghum-Sudan Hay)	3.75 tons/ac	160	160
Oats	2-3 tons/ac	120	120
Wheat Forage	2 tons/ac	160	160
Triticale	3.5 tons/ac	160	160
Millet Hay	5.5 tons/ac	150	150

Source: Texas A&M University's crops spreadsheet

22. Maximum Hydraulic Application Rate

The maximum effluent application rates shall be as follows. Should this rate result in nitrogen applications exceeding the maximum nitrogen application rate, the maximum effluent application rate is limited by the maximum nitrogen application rate. The total effluent applied shall be tabulated using Attachment F

Crop	Max Effluent Application	
	Ac-ft/ac/yr	Gal/ac/yr
Cotton	3.89	1,267,562
Wheat or Triticale	4.24	1,381,610
Alfalfa	7.00	2,280,960
Wheatgrass	4.36	1,420,712
Annual Ryegrass	4.21	1,371,834
Haygrazer (Sorghum-Sudan Hay)	3.05	993,847
Bermudagrass	4.14	1,349,025
Oats	3.89	1,267,562
Millet	3.05	993,847
Wheat or Triticale/Haygrazer	6.00	1,955,108
Oats/Millet Hay	6.00	1,955,108
Warm/Cool Season Grass	4.98	1,622,740

23. Application of effluent shall occur only during months with active crop growth as defined in the table below with the one exception that an application of 1 (one) inch/acre/year shall be allowed no more than 2 weeks before crop planting for single-season row-crop application areas. No effluent application shall be allowed after the last crop harvest.

Crop	Effluent Application Period
Cotton	May – October
Wheat or Triticale	September – June
Alfalfa	Year Round
Wheatgrass	Year Round
Annual Ryegrass	November – April
Haygrazer (Sorghum-Sudan Hay)	June – October
Bermudagrass	March-October
Oats	November-July
Millet	June – October
Wheat or Triticale/Haygrazer	Year Round
Oats/Millet Hay	Year Round
Warm/Cool Season Grass	Year Round

24. The permittee is authorized to divert treated effluent to the stock tanks as shown on attachment c3. The overflow of effluent from any of the stock tanks is a violation of this permit.
25. The permittee shall comply with the latest TCEQ test procedures for the analysis of pollutants specified in 30 TAC Sections 319.10 - 319.11. Measurements, tests and calculations shall be accurately accomplished in a representative manner.
26. The permittee shall install a soil moisture monitoring system that conforms to acceptable agronomic technique such as tensiometers, piezometers or gypsum blocks. This information shall be used with the Crop Management Plan to determine the proper time and amount of wastewater to be applied.

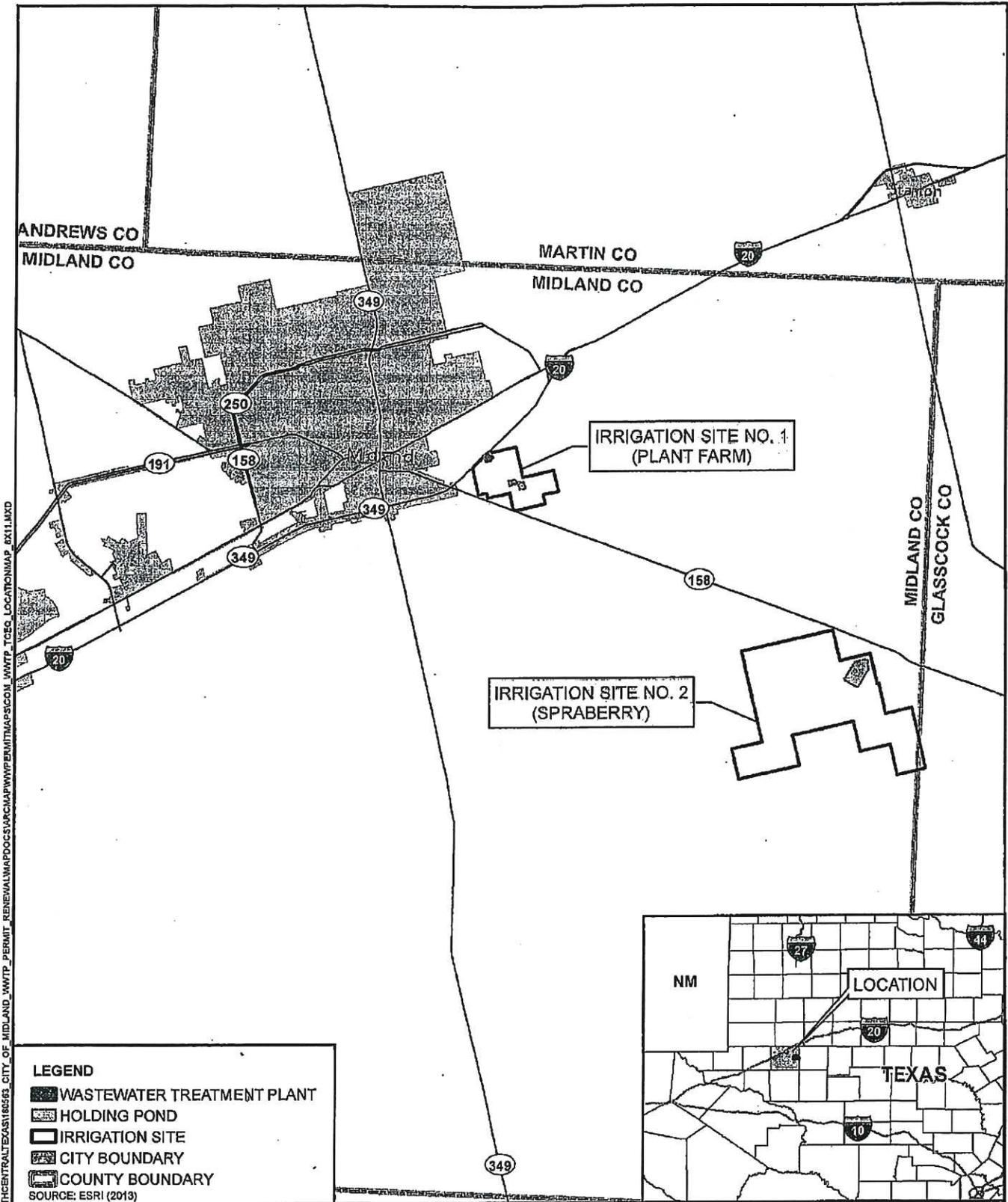
The permittee shall summarize the soil moisture monitoring data by month and submit them to the TCEQ Regional Office (MC Region 7), the TCEQ Water Quality Compliance Team (MC 224) of the Enforcement Division, and the Water Quality Assessment Team (MC 150) as a part of the Annual Irrigation Report, along with irrigation data as noted below, in November of each year.

27. The permittee shall maintain monthly records of wastewater application of each irrigation site. These records shall contain the following information:
  - a) Month
  - b) Number of acres of each crop in each unit under cultivation
  - c) Total monthly irrigation flow to each unit (gallons/month)
  - d) Irrigation application rate in each unit (acre-feet/acre/year)

The permittee shall summarize the records by month and submit them as part of the Annual Irrigation Report to the TCEQ Regional Office (MC Region 7) and the TCEQ Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, and the Water Quality Assessment Team (MC 150) by November 30<sup>th</sup> of each year.

28. The permittee shall use cultural practices to promote and maintain the health and propagation of the crops and avoid plant lodging. The permittee shall harvest the crops (cut and remove it from the field) at least one time during the year, unless crop failure occurs. Harvesting and mowing dates shall be recorded and kept on site to be made available to TCEQ personnel upon request.
29. The physical condition of the land application fields will be monitored on a weekly basis. Any areas with problems such as surface runoff, surficial erosion, stressed or damaged vegetation, etc., will be recorded in the field log kept onsite and corrective measures will be initiated within 24 hours.
30. For each application area utilized, except those planted to wheatgrass, a minimum of 1 acre-foot of irrigation per acre (325,828 gallons/acre) during the growing season of that crop as defined in Special Provision 23. In cases where this rate would exceed the Nitrogen limit of the crop, effluent applications shall be capped at the Nitrogen limit as defined in Special Provision 21.

31. Irrigation data for each field shall be recorded as shown in Attachment F. Irrigation and sludge application data (should either be applied to an application area) shall be recorded and kept at the plant site to be made available to TCEQ personnel upon request and included in the Annual Irrigation Report.
32. The permittee shall dispose of the stabilized sludge from the digestion process by application on city-owned land area, designated as Areas F, G, I, J, K, L, M, O and P (Attachment B). No sludge may be applied in liquid form to public lands without specific approval from the Commission. Site access shall be restricted to authorized personnel on all sludge disposal sites. Distribution shall be in accordance with the following provisions:
  - a. Application of liquid sludge may be made utilizing a soil injection method or utilizing surface spreading followed by discing as needed to prevent development of nuisance conditions or to prevent sludge material in surface runoff from the disposal site from entering the waters of the State.
  - b. Sludge disposal rates for the above-mentioned sites shall not exceed the nitrogen limits given in Special Provision No. 21.
  - c. The permittee shall ensure that the disposal of sludge does not cause any contamination of the ground or surface waters in the State.
  - d. The permittee shall keep record of all sludge distributed for use as a soil conditioner. The records shall include the following information:
    - i) Volume of sludge distributed.
    - ii) Date distributed and date applied to site.
    - iii) Location and size (area) of disposal site.
    - iv) Method of disposal (i.e., spread on surface, disced in, etc.).
  - e. Refer to Sludge Provisions of the permit, Sections I and II.
  - f. The provisions of 30 TAC Section 312.44, Management Practices, shall be complied with.
33. The permittee shall implement the Crop Management Plan dated January 24, 2014 and any subsequent revisions either required by or approved by the TCEQ Water Quality Assessment Team (MC 150).

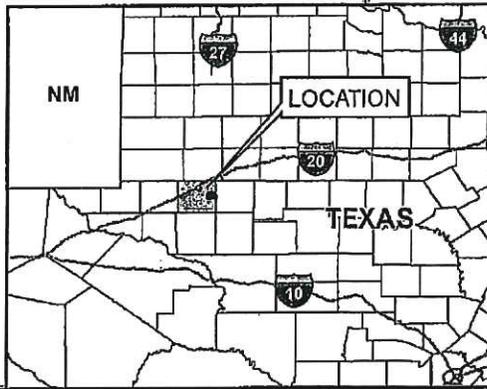


FILE: N:\DRP\036\_SOUTH CENTRAL\TEXAS\180503\_CITY OF MIDLAND\_WWTP\_PERMIT\_RENEWAL\MAPDOCS\ARC\MAP\WWTP\TCES\_LOCATIONMAP\_0311.MXD

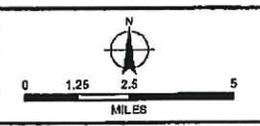
**LEGEND**

-  WASTEWATER TREATMENT PLANT
-  HOLDING POND
-  IRRIGATION SITE
-  CITY BOUNDARY
-  COUNTY BOUNDARY

SOURCE: ESRI (2013)



**CITY OF MIDLAND  
WASTEWATER TREATMENT PLANT  
2012 PERMIT RENEWAL  
LOCATION MAP**

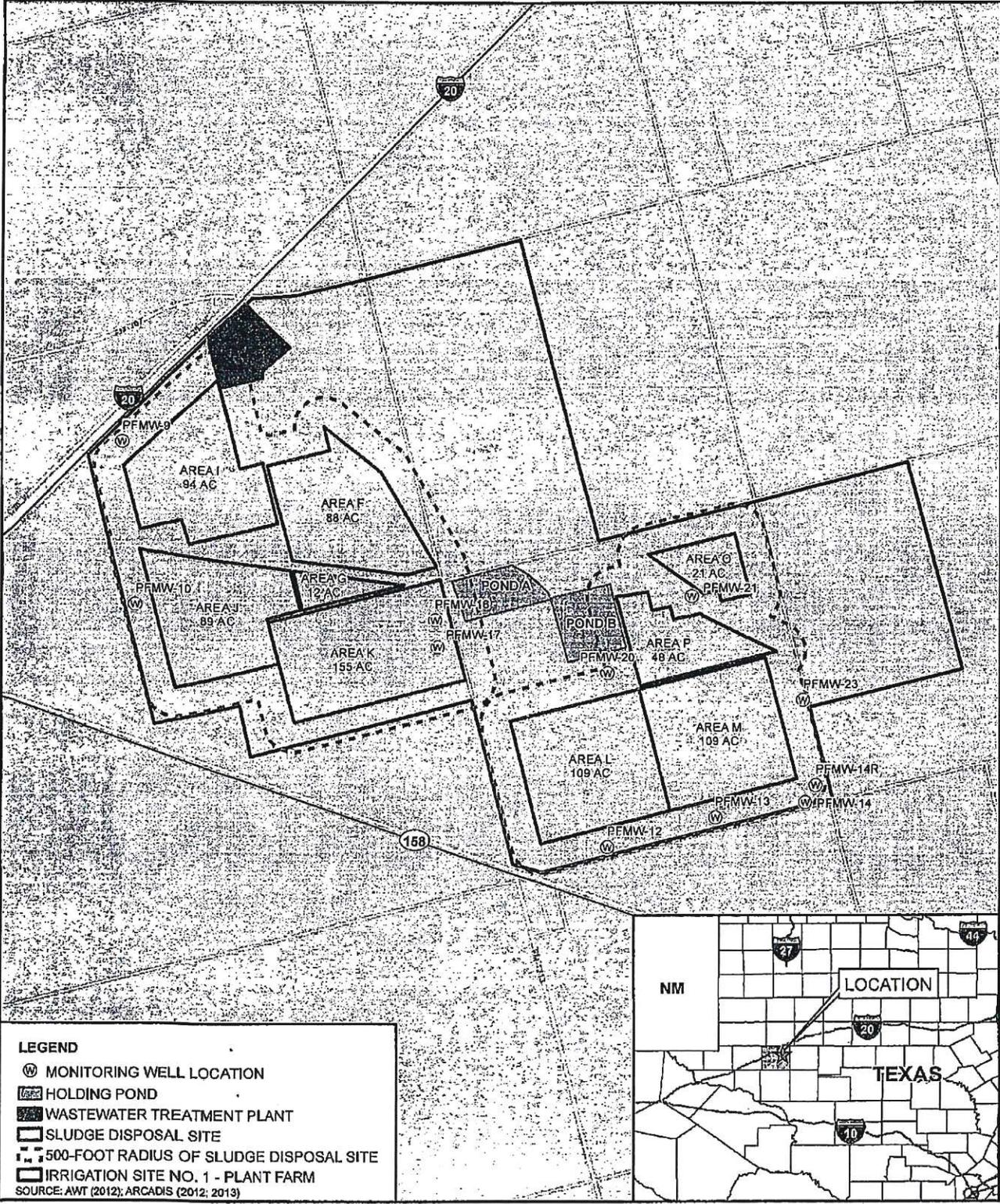


**HDR** HDR ENGINEERING, INC.  
11111 FRESTON RD. SUITE 200  
DALLAS, TX 75248-1332  
972-461-1400

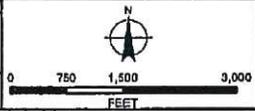
**ATTACHMENT A**

WQ0010223001

FILE: N05EPT06 SOUTH CENTRAL TEXAS 10593.CITY OF MIDLAND\_WWTP\_PERMIT\_RENEWAL\MAPDOCS\ARCADIS\WATER\IT\MAPS\C011\_WWTP\_TC02\_P1\_SLUDGE\_APPLICATION\AREA.MAP\_8X11.MXD



**CITY OF MIDLAND**  
**WASTEWATER TREATMENT PLANT**  
**2012 PERMIT RENEWAL**  
**IRRIGATION SITE NO. 1 - PLANT FARM**  
**SLUDGE APPLICATION AREA MAP**

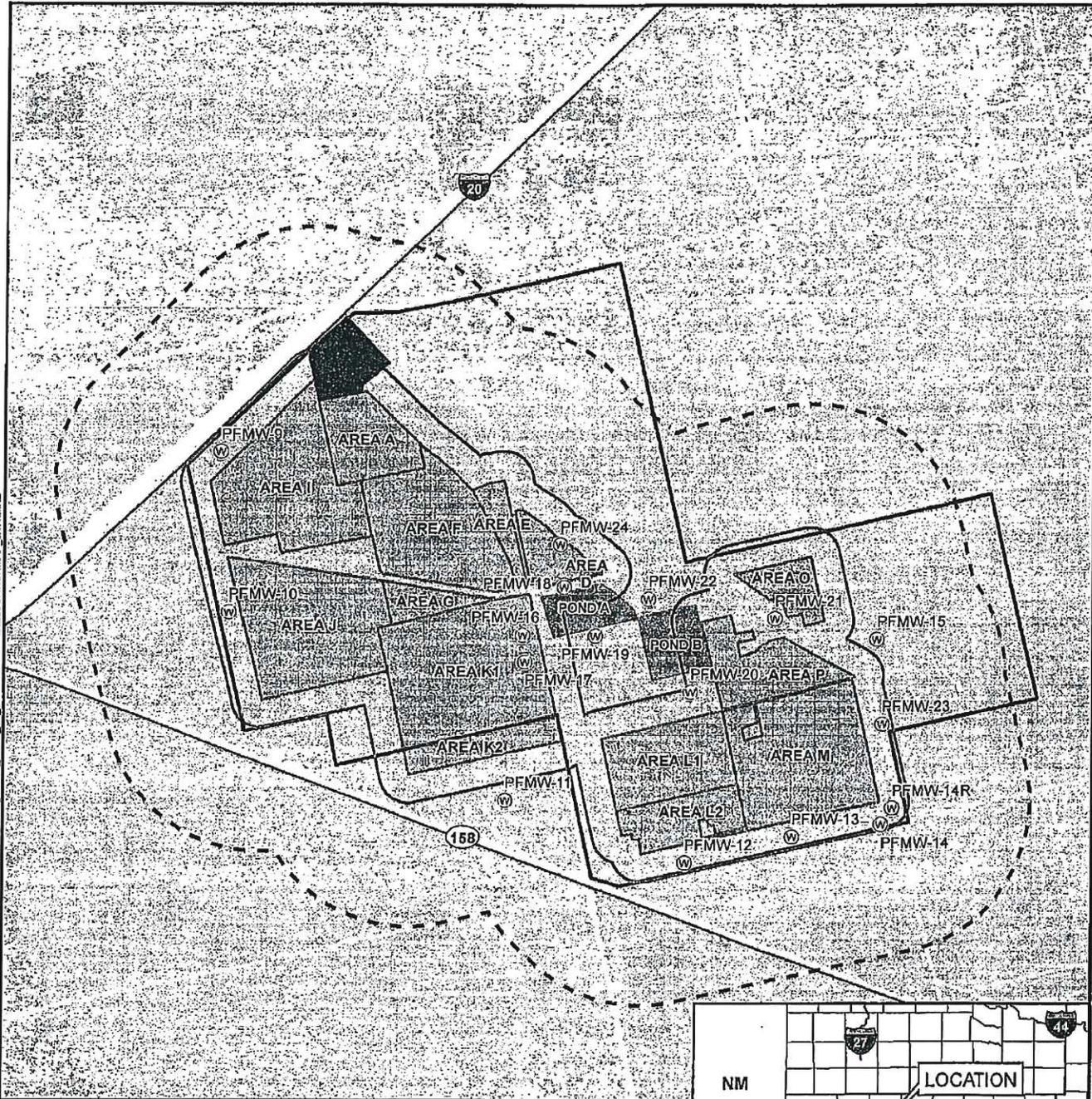


**HDR** HDR ENGINEERING, INC.  
 17111 PARESON RD., SUITE 200  
 DALLAS, TX 75248-1223  
 972-966-4400

**ATTACHMENT B**

WQ0010223001

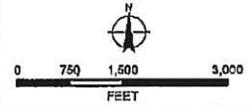
FILE: N:\DEPT06\_SOUTHCENTRAL\TEXAS\180563\_CITY\_OF\_MIDLAND\_WWTP\_PERMIT\_RENEWAL\MAPDOCS\ARCHMAP\TCEQCOM\_WWTP\_TCEQ\_PE\_MONITORINGWELLLOCATIONMAP\_8311.MXD



- LEGEND**
- Ⓜ MONITORING WELL LOCATION
  - 500-FOOT RADIUS OF EFFLUENT APPLICATION AREA
  - HOLDING POND
  - ▨ EFFLUENT APPLICATION AREA
  - WASTEWATER TREATMENT PLANT
  - ⊕ 1/2-MILE RADIUS OF EFFLUENT APPLICATION AREA
  - IRRIGATION SITE NO. 1 - PLANT FARM
- SOURCE: AWT (2012); ARCADIS (2012; 2013)



**CITY OF MIDLAND**  
**WASTEWATER TREATMENT PLANT**  
**2012 PERMIT RENEWAL**  
**IRRIGATION SITE NO. 1 - PLANT FARM**  
**MONITORING WELL LOCATION MAP**



**HDR** HDR ENGINEERING, INC.  
 37411 PRESBYTERIAN RD., SUITE 100  
 DALLAS, TX 75244-1822  
 873-945-4100

**ATTACHMENT C1**

WQ0010223001

FILE: \NDRP\TDS\_SOUTH\CENTRAL\TEXAS\180551\_CITY\_OF\_MIDLAND\_WWTP\_PERMIT\_RENEWAL\WAPDOCS\ARC\MAPTCEOCON\_WWTP\_TCEO\_SB\_MONITORINGWELLLOCATIONMAP\_0311.DWG



**LEGEND**

- ⊙ MONITORING WELL LOCATION
  - ▨ EFFLUENT APPLICATION AREA
  - 500-FOOT RADIUS OF EFFLUENT APPLICATION AREA
  - ⊞ 1/2-MILE RADIUS OF EFFLUENT APPLICATION AREA
  - TERMINAL STORAGE RESERVOIR
  - ▭ IRRIGATION SITE NO. 2 - SPRABERRY
- SOURCE: ARCADIS (2012; 2013)



**CITY OF MIDLAND**  
**WASTEWATER TREATMENT PLANT**  
**2012 PERMIT RENEWAL**  
**IRRIGATION SITE NO.2 - SPRABERRY**  
**MONITORING WELL LOCATION MAP**



**HDR** HDR ENGINEERING, INC.  
 17111 PHEONIX RD., SUITE 200  
 DALLAS, TX 75248-1003  
 972-930-4480

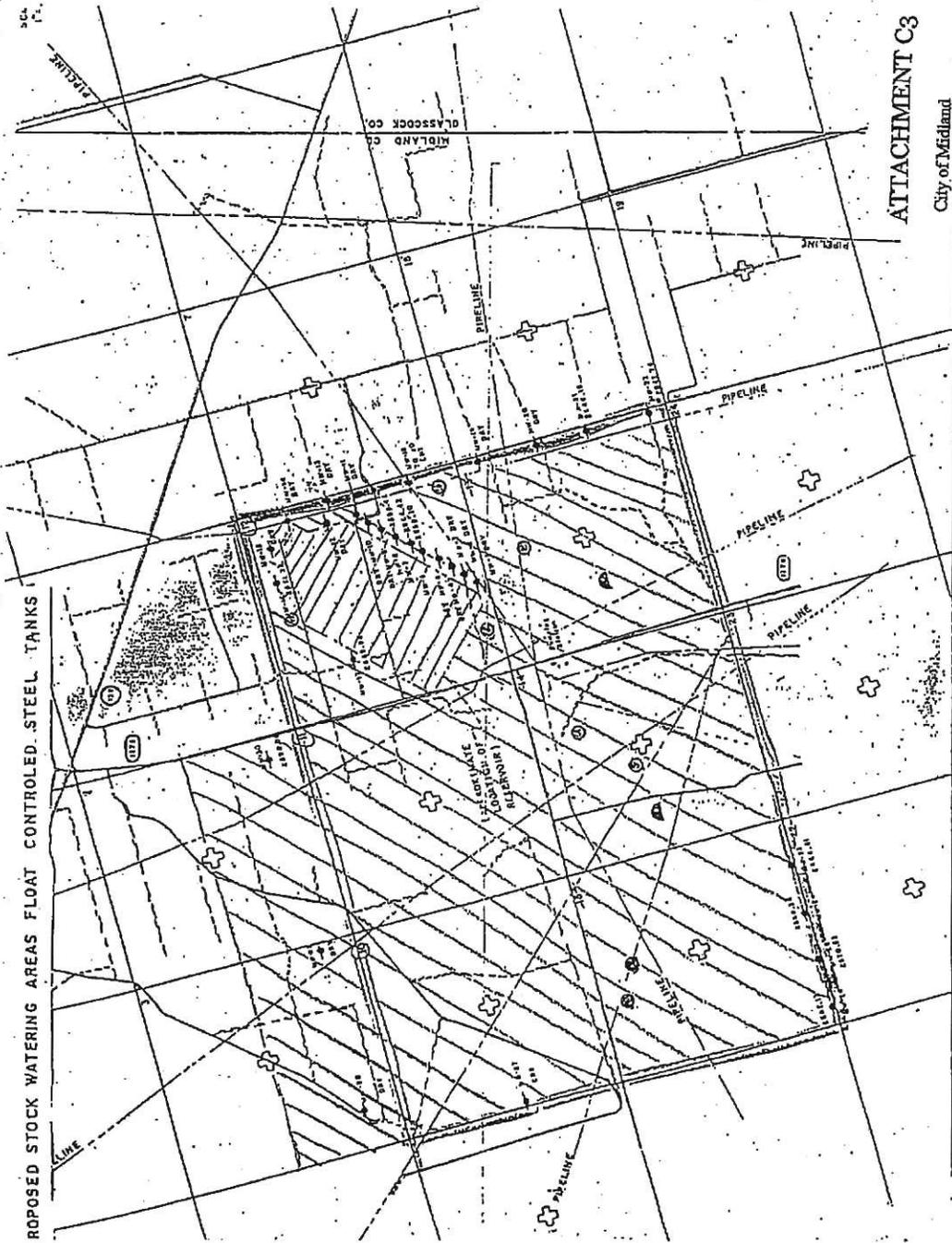
**ATTACHMENT C2**

WQ0010223001

EXISTING SMALL POND 30' X 30' ±

EXISTING STEEL STOCK TANKS

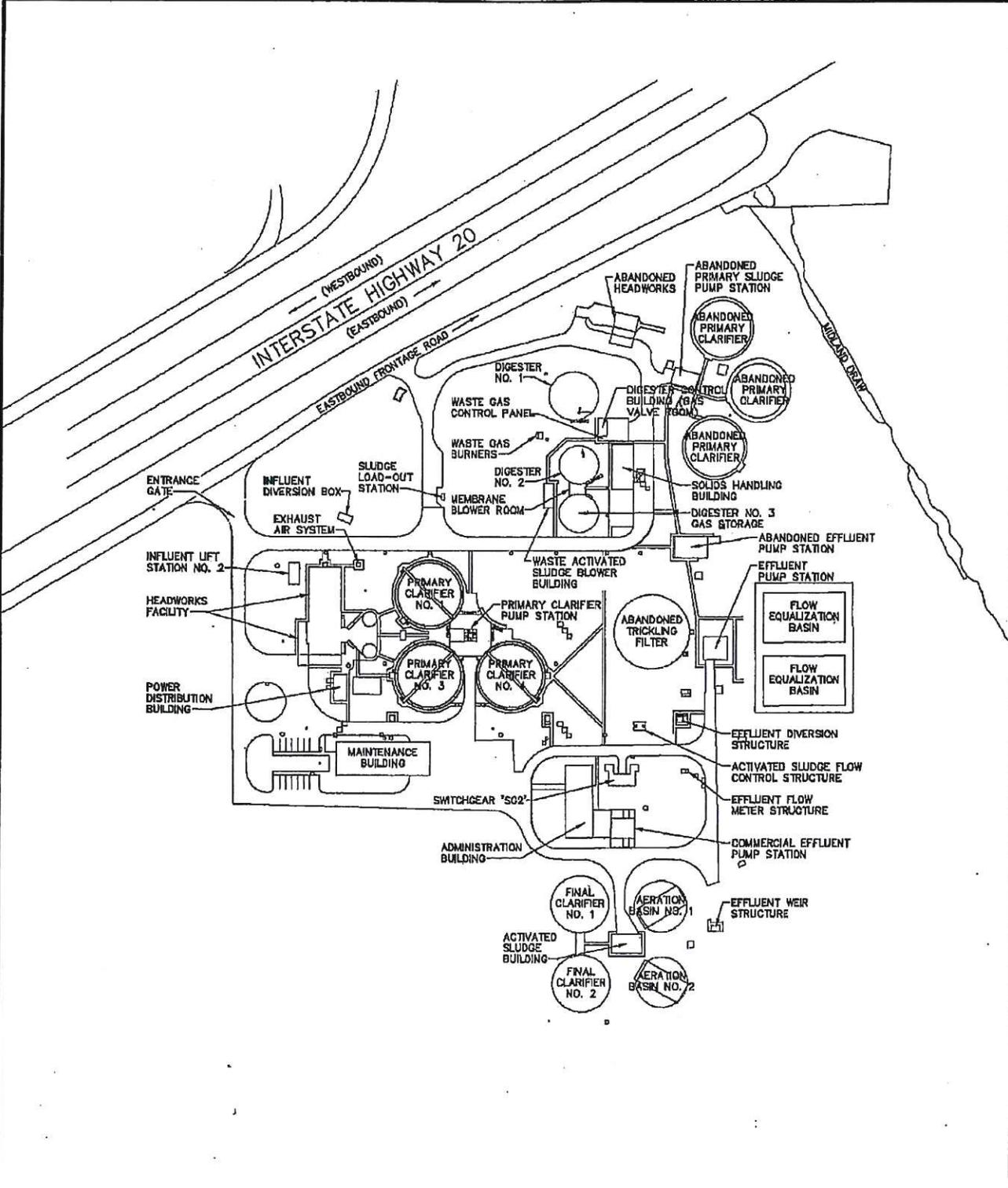
PROPOSED STOCK WATERING AREAS FLOAT CONTROLLED STEEL TANKS



ATTACHMENT C3

City of Midland  
TCBQ Permit No. WQ0010223001

FILE: M:\DEPT038\_SOUTH\CENTRAL\TXAS\1180563\_CITY\_OF\_MIDLAND\_WWTP\_PERMIT\_RENEWAL\MAPS\ARCH\WATER\WTP\_SITE\_PLAN\_0111.MXD



SOURCE: HDR ENGINEERING (2013)

**CITY OF MIDLAND**  
**WASTEWATER TREATMENT PLANT**  
 2012 PERMIT RENEWAL  
**WASTEWATER TREATMENT PLANT SITE PLAN**



**HDR** HDR ENGINEERING, INC.  
 (7111 PRESTON RD, SUITE 200)  
 DALLAS, TX 75240-1203  
 972-400-1400

**ATTACHMENT D**

WQ0010223001



# Texas Department of Transportation

3901 EAST HIGHWAY 80 • ODESSA, TEXAS 79761-0501 • (915) 332-0501

July 11, 1995

Mr. Kenneth D. Jones  
Director of Utilities  
City of Midland  
P. O. Box 1152  
Midland, Texas 79702

Re: City of Midland - Amendment of TNRCC Permit No. 10223-001

Dear Mr. Jones:

After a brief review of your existing Water Pollution Control Plant (WPCP) location and upon reflection that the WPCP units in question were existing prior to Interstate 20 construction in the early 1970's, we have no objection to their remaining in service and to the City of Midland using our right-of-way as buffer zone. The existing unit is over 100 feet from our right-of-way for the south access road and should present no new problems.

Sincerely

Mike C. McAnally, P.E.  
Director of Operations

MCM/ss

City of Midland  
ATTACHMENT E  
TCBQ Permit No. WQ0010223001

Attachment F  
WQ0010223001  
Hydraulic and Nitrogen Applications Accounting – Effluent + Sludge

<b>Field</b>				<b>Month</b>				Soil N, lbs/ac			
<b>Crop</b>				Cumulative Effluent, Gal/acre <sup>(2)</sup>							
Crop hydraulic limit, gal/acre <sup>(1)</sup>				Crop N requirement, lbs N/acre <sup>(1)</sup>							
Cumulative Sludge, Wet tons/acre <sup>(2)</sup>				Cumulative N to Date, lbs N/ac <sup>(2)</sup>							
F	Sludge – Water Conversion Factor			2.3965	G	Effluent Conversion Factor			0.000,006,676		
Effluent Composition <sup>(3)</sup>					Sludge Composition <sup>(3)</sup>						
TKN, mg/L	NO <sub>3</sub> -N, mg/L	I = TKN + NO <sub>3</sub>	Effective Dates	K = % Solids	TKN, mg/L	NO <sub>3</sub> -N, mg/L	NH <sub>4</sub> -N, mg/L	PAN = 0.2*TKN + 0.3*NH <sub>4</sub> -N + 0.8*NO <sub>3</sub> -N	Effective Dates		
Day of the Month	A	B	C = B/A	D	E = D*F* (100-K) ÷ A	H = C+E	Σ(H) <sup>(4)</sup>	J = C*I*G	L = PAN* (K/100)*D	(L+J)	Σ(L+J) <sup>(5)</sup>
	Irrigated Acres	Effluent Applied		Sludge added	Sludge Water	Total Daily	Cum. Total	Daily Effluent N	Daily Sludge N	Daily N	Cum. N
	Acres	Gal.	Gal./ac	Wet tons	Gal./ac	Gal./ac	Gal./ac	Lbs N/day/ac	Lbs N/day/ac	Lbs N/day/ac	Lbs N/ac
1											
2											
3											
4											

Attachment F Page 1 of 3  
Permit No. WQ0010223001

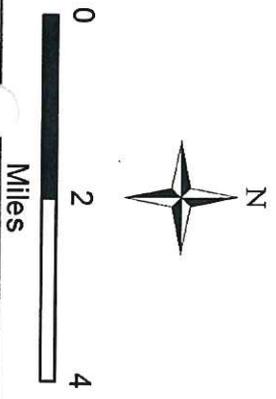
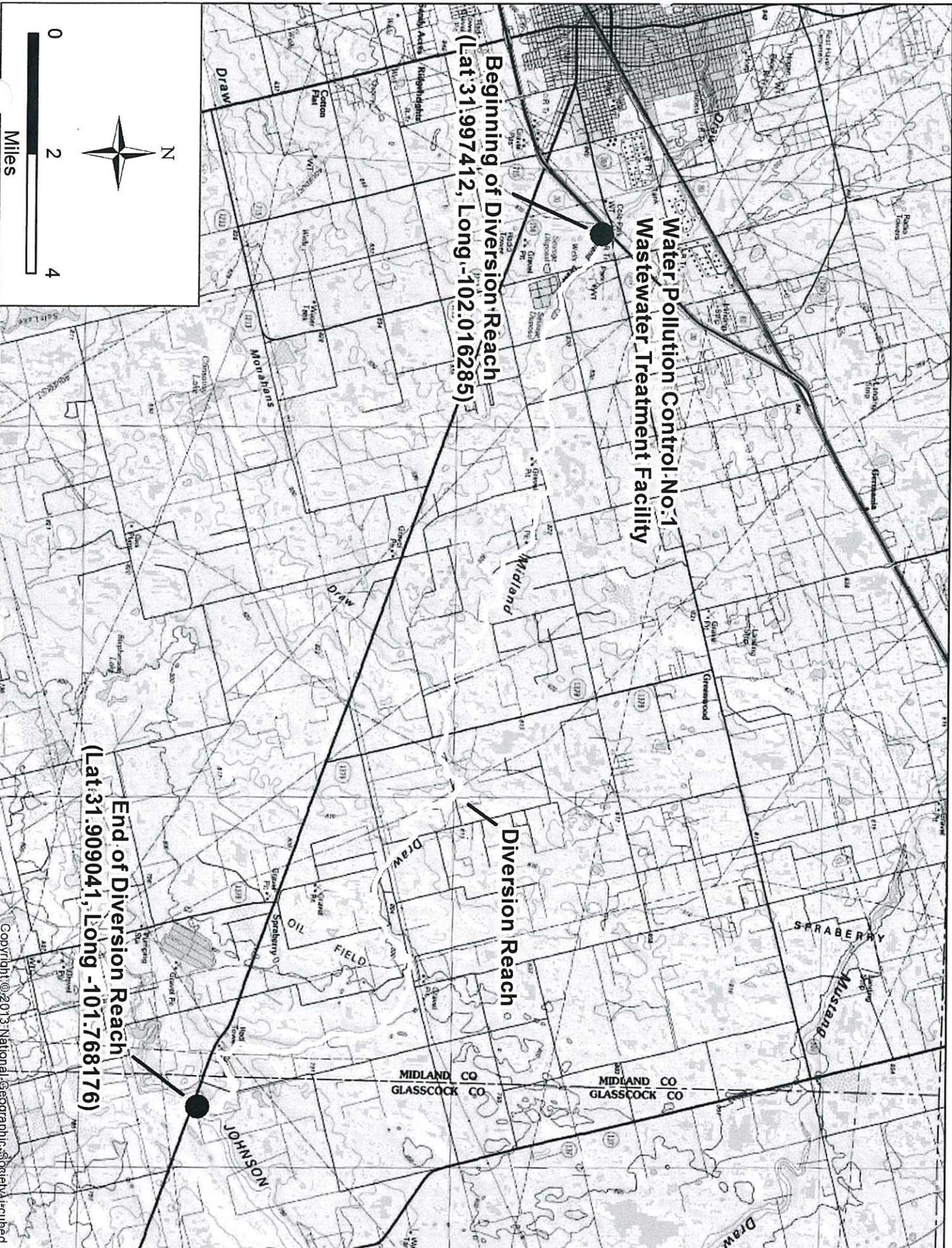


cumulative nitrogen applied for the first day of the month is the sum of nitrogen applications for that date plus the Cumulative N applied to date. For other dates, the cumulative nitrogen applied is the sum of nitrogen applied on that date plus the cumulative nitrogen applied the day before. For crops that grow year round, the Cumulative additions start at the soil test nitrogen on September 1 and continue through August 31. The Cumulative values cannot exceed the Crop hydraulic limit and N requirement values. All applications must cease when either cumulative value reaches the limit for that value.

- \* (3) The entries in this table are used for the calculations that follow. Sludge nitrogen analyses are on a dry weight basis. Allowances are made for up to 5 sludge and effluent analyses in a month (should be kept with the application records). The latest values available for that date should be used for calculations. The effective dates define the set of values that should be utilized in the table below. The beginning date should be the date that the concentration data is received and the ending date should be the day before the next set of data is received. The received date is used rather than the sample date to prevent accidental violations in cases where the new concentration is higher than the older data.
- \* (4) Gallons wastewater plus sludge water are used because effluent flow is measured in gallons, thereby reducing the potential for calculation errors. The effluent gallons are measured as applied. The sludge water is that part of the sludge that is not solids (100 - % solids).
- \* (5) Pounds nitrogen per acre irrigated per day (lbs/acre/day) shall be calculated as a mass loading of total nitrogen. The mass of effluent nitrogen shall be determined by total nitrogen effluent concentration determined by the latest effluent analysis (supplied with tables) multiplied by the volume of effluent applied during the day and multiplied by the conversion factor 0.000,006,676 (i.e., total nitrogen, mg/L\*volume of effluent applied, gallons/day\*0.000,006,676 = nitrogen, lbs/day). The sludge nitrogen shall be determined by multiplying the PAN value by the wet tons of sludge per acre added times the percent sludge solids divided by 100. The loading (per acre) is determined by summing the effluent and sludge nitrogen.

**E. Monthly Discharge Data to Plant Farm and Spraberry**

Date		Flow MGD- Plant Farm	Flow MGD- Spraberry	BOD <sub>5</sub> mg/l	TSS mg/l	pH	Chlorine Residual mg/l	Acres irrigated- Plant Farm	Acres irrigated- Spraberry
Sep-15	max	0.88	0.51	55	55	7.9	N/A	792	2,610
	min	0	0	29	29	7.7	N/A	792	2,610
	avgs	0.27	0.15	39	39	7.82	N/A	792	2,610
Oct-15	max	1.13	0.39	77	55	8	N/A	792	2,610
	min	0	0	15	16	7.5	N/A	792	2,610
	avg	0.27	0.18	54	29	7.77	N/A	792	2,610
Nov-15	max	1.08	0.37	97	29	7.9	N/A	792	2,610
	min	0	0	11	12	7.3	N/A	792	2,610
	avg	0.25	0.17	25	17	7.68	N/A	792	2,610
Dec-15	max	1.3	0.28	147	43	7.8	N/A	792	2,610
	min	0	0	71	8	7.1	N/A	792	2,610
	avg	0.28	0.13	113	25	7.46	N/A	792	2,610
Jan-16	max	1.3	0.37	109	50	7.9	N/A	792	2,610
	min	0	0	12	19	7.2	N/A	792	2,610
	avg	0.35	0.17	48	30	7.5	N/A	792	2,610
Feb-16	max	1.34	0.43	26	71	8.0	N/A	792	2,610
	min	0	0	12	22	7.5	N/A	792	2,610
	avg	0.33	0.2	19	35	7.6	N/A	792	2,610
Mar-16	max	1.25	0.55	64	63	7.9	N/A	792	2,610
	min	0	0	12	23	7.3	N/A	792	2,610
	avg	0.33	0.24	23	40	7.7	N/A	792	2,610
Apr-16	max	1.3	0.48	52	58	8.0	N/A	792	2,610
	min	0	0	14	16	7.6	N/A	792	2,610
	avg	0.36	0.23	30	35	7.8	N/A	792	2,610
May-16	max	1.04	0.5	56	61	7.9	N/A	792	2,610
	min	0	0	12	24	7.5	N/A	792	2,610
	avg	0.31	0.21	42	35	7.8	N/A	792	2,610
Jun-16	max	1.3	0.49	69	75	7.9	N/A	792	2,610
	min	0	0	47	38	7.5	N/A	792	2,610
	avg	0.31	0.2	55	51	7.7	N/A	792	2,610
Jul-16	max	1.3	0.46	57	91	8.0	N/A	792	2,610
	min	0	0	21	44	7.6	N/A	792	2,610
	avg	0.33	0.19	40	76	7.8	N/A	792	2,610
Aug-16	max	1.17	0.37	72	101	8.0	N/A	792	2,610
	min	0	0	9	52	7.0	N/A	792	2,610
	avg	0.28	0.16	35	70	7.8	N/A	792	2,610



Copyright © 2013 National Geographic Society, Inc. All rights reserved.

ORDINANCE NO. 9310

**AN ORDINANCE OF THE CITY OF MIDLAND, TEXAS, ESTABLISHING AND ADOPTING A DROUGHT CONTINGENCY PLAN FOR THE CITY OF MIDLAND, TEXAS, IN ORDER TO CONSERVE THE AVAILABLE WATER SUPPLY AND PROTECT THE INTEGRITY OF WATER SUPPLY FACILITIES; AND TO PROTECT AND PRESERVE PUBLIC HEALTH, WELFARE, AND SAFETY AND MINIMIZE THE ADVERSE IMPACT OF WATER SUPPLY SHORTAGES OR OTHER WATER SUPPLY EMERGENCY CONDITIONS; CONTAINING A CUMULATIVE CLAUSE; CONTAINING A SAVINGS AND SEVERABILITY CLAUSE; PROVIDING FOR A MAXIMUM PENALTY OR FINE OF FIVE HUNDRED DOLLARS (\$500.00); AND NEGATING A MENTAL STATE; AND ORDERING PUBLICATION**

**WHEREAS**, the City Council deems it to be in the public interest to establish and adopt a drought contingency plan for the City of Midland, Texas; and

**WHEREAS**, the City Council deems it necessary to adopt a drought contingency plan in order to conserve the available water supply and protect the integrity of water supply facilities; and

**WHEREAS**, the City Council finds it to be in the public interest to protect and preserve public health, welfare, and safety and minimize the adverse impact of water supply shortages or other water supply emergency conditions;

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:**

**SECTION ONE.** That the drought contingency plan attached to this ordinance and marked as Exhibit A, is hereby adopted and implemented for all purposes.

**SECTION TWO.** The provisions of this ordinance are to be cumulative of all other ordinances or parts of ordinances governing or regulating the same subject matter as that covered herein; provided, however, that all prior ordinances or parts of ordinances inconsistent with or in conflict with any of the provisions of this ordinance are hereby expressly repealed to the extent of any such inconsistency or conflict.

**SECTION THREE.** If any section, subsection, sentence, clause or phrase of this

ordinance is, for any reason, held to be unconstitutional or invalid, such holding shall not affect the validity of the remaining portions of this ordinance. The Council of the City of Midland hereby declares that it would have passed this ordinance and each section, subsection, sentence, clause, or phrase hereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared unconstitutional or invalid.

**SECTION FOUR.** The penalty for violation of this ordinance shall be in accordance with the general penalty provisions contained in Section 1-3-1 of the City Code of Midland, Texas, which provides for a fine not exceeding five hundred dollars (\$500.00). It is hereby declared that the culpable mental state required by Texas Penal Code Section 6.02 is specifically negated and clearly and plainly dispensed with and an offense under this ordinance is declared to be a strict liability offense. Each day such violation shall continue, or be permitted to continue, shall be deemed a separate offense.

**SECTION FIVE.** The City Secretary is hereby authorized and directed to publish the descriptive caption of this ordinance in the manner and for the length of time prescribed by law as an alternative method of publication.

The above and foregoing ordinance was duly proposed, read in full and adopted on first reading, the 12th day of August, A.D., 2014; and passed to second reading on motion of Council member Dufford, seconded by Council member Lacy, by the following vote:

Council members voting "AYE": Hotchkiss, Love, Sparks, Morales, Dufford, Lacy, Robnett

Council members voting "NAY": None

The above and foregoing ordinance was read in full and finally adopted by the following vote upon motion of Council member Hotchkiss, seconded by Council member Lacy, on the 26th day of August, A.D., 2014, at a regular meeting of the City Council:

Council members voting "AYE": Hotchkiss, Love, Sparks, Dufford, Lacy, Robnett

Council members voting "NAY": None

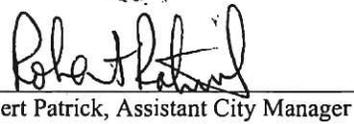
PASSED AND APPROVED THIS 26th day of August, A.D., 2014.

  
Jerry F. Morales, Mayor

ATTEST:

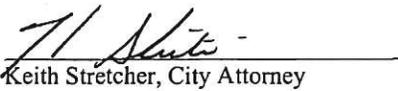
  
Amy M. Turner, City Secretary

APPROVED AS TO CONTENT  
AND COMPLETENESS:

  
Robert Patrick, Assistant City Manager

  
Holly McGrath-Rosas, Assistant Director  
of Utilities

APPROVED ONLY AS TO FORM:

  
Keith Stretcher, City Attorney

**Drought Contingency Plan for City of  
Midland, Texas**

Exhibit "A"

## **Table of contents**

- I. Declaration of Policy, Purpose and Intent
- II. TCEQ Rules
- III. Provisions to Inform the Public and Opportunity for Public Input
- IV. Public Education
- V. Coordination with Regional Water Planning Groups
  
- VI. Initiation and termination of Drought Response Stages
- VII. Goals for Reduction in Water Use
- VIII. Drought and Emergency Response Stages
- IX. Enforcement
- X. Variances
- XI. Review and Update of Drought Contingency Plan

### **APPENDICES**

- APPENDIX A -Definitions
- APPENDIX B -Texas Commission on Environmental Quality Rules on Drought Contingency Plans
- APPENDIX C- List of References

## **Drought Contingency Plan for the City of Midland, Texas**

(Revised June, 2014)

### **I. Declaration of Policy, Purpose and Intent**

In order to conserve the available Water supply and protect the integrity of Water supply facilities, with particular regard for domestic Water use, sanitation, and fire protection, and to protect and preserve public health, welfare, and safety and minimize the adverse impacts of Water supply shortage or other Water supply emergency conditions, the City of Midland hereby adopts the following regulations and restrictions on the delivery and consumption of Water.

Water uses regulated or prohibited under this Drought Contingency Plan are considered to be non-essential and continuation of such uses during times of Water shortage or other emergency water supply conditions are deemed to constitute a waste of Water which subjects the offender(s) to penalties as defined in Section IX of this Plan.

## **II. TCEQ Rules**

The TCEQ rules governing development of drought contingency plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code. Copy of rules also in Appendix B.

## **III. Provisions to Inform the Public and Opportunity for Public Input**

Opportunity for the public to provide input into the preparation of the Drought Contingency Plan was provided by the City of Midland by means of press releases and scheduling and providing public notice of a public meeting to accept input of the Drought Contingency Plan in the newspaper.

## **IV. Public Education**

The City of Midland will periodically provide the public with information about the Drought Contingency Plan, including information about the conditions under which each stage of the Drought Contingency Plan is to be initiated or terminated and the drought response measures to be implemented in each stage. This information will be provided by means of press releases and utility bill inserts.

## **V. Coordination with Regional Water Planning Groups**

The service area of the city of Midland is located within the Region F water planning area and the City of Midland has provided a copy of this Drought Contingency Plan to the Region F Planning Group.

## **VI. Initiation and termination of Drought Response Stages**

The City Manager, or his/her designee, shall monitor Water supply and/or demand conditions on a daily basis and shall determine when conditions warrant initiation or termination of each stage of the Drought Contingency Plan. Public notification of the initiation or termination of drought response stages shall be by means of press releases. The triggering criteria described below are based on the Water supply sources and a statistical analysis of the vulnerability of the Water source under drought of record conditions.

### **(a) Stage 1 Mild Water Shortage Conditions**

Requirements for initiation Customers shall be requested to voluntarily conserve Water and adhere to the prescribed restrictions on certain Water uses, defined in Appendix A, when;

1. Pursuant to requirements specified in the City of Midland wholesale water purchase contract

with CRMWD notification is received requesting initiation of Stage 1 of the Drought Contingency Plan; or

2. Request of the Colorado River Municipal Water District due to limitation in available supplies or their transmission facilities; or
3. Request of the Midland Fresh Water Supply District #1 due to limitation in available supplies or transmission; or
4. Total daily Water demand reaches 94% of the treatment plant capacity for 5 consecutive days.

Requirements for termination Stage 1 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased for a period of 3 days.

#### **(b) Stage 2 Moderate Water Shortage Conditions**

Requirements for initiation Customers shall be required to comply with the requirements and restrictions on certain non-essential Water uses provided in appendix A of the Drought Contingency Plan, when

1. Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 2 of the Drought Contingency Plan; or
2. Request of the Colorado River Municipal Water District due to limitation in available supplies or their transmission facilities; or
3. Total daily water demand reaches or exceeds 95% of the water plant's capacity for 5 consecutive days; or
4. Request of the Midland Fresh Water Supply District #1 due to limitation in available supplies or transmission.

Requirements for termination Stage 2 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased to exist for a period of 5 consecutive days. Upon termination of Stage 2, Stage 1 becomes operative.

#### **(c) Stage 3 Severe Water Shortage Conditions**

Requirements for initiation Customers shall be required to comply with the requirements and restrictions on certain non-essential Water uses for Stage 3 of this Drought Contingency Plan, when

1. Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 3 of the Drought Contingency Plan; or
2. Request of the Midland Fresh Water Supply District #1 to initiation of Stage 3 of the Drought Contingency Plan due to limitation in available supplies or transmission.
3. The failure or threatening failure of a major system component will result in an immediate health or safety hazard; or
4. Total daily Water demand reaches the system limit, stressing the system to failure.

Requirements for termination Stage 3 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased to exist for a period of 7 consecutive days. Upon termination of Stage 3, Stage 2 becomes operative.

**(d) Stage 4 Critical Water Shortage Conditions**

Requirements for initiation Customers shall be required to comply with the requirements and restrictions on certain non-essential Water uses for Stage 4 of this Drought Contingency Plan, When

1. Pursuant to requirements specified in the City of Midland wholesale water purchase contract with CRMWD notification is received requesting initiation of Stage 4 of the Drought Contingency Plan; or
2. Request of the Midland Fresh Water Supply District #1 to initiation of Stage 3 of the Drought Contingency Plan due to limitation in available supplies or transmission; or
3. Treated Water storage levels do not restore overnight.

Requirements for termination Stage 4 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased to exist for a period of 3 consecutive days. Upon termination of Stage 4, Stage 3 becomes operative.

**(e) Stage 5 Emergency Water Shortage Conditions**

Requirements for initiation Customers shall be required to comply with the requirements and restrictions for Stage 5 of this Drought Contingency Plan when the City Manager, or his/her designee, determines that a Water supply emergency exists based on:

1. Major Water line breaks, or pump or system failure occurs, which cause unprecedented loss of capability to provide Water service; or
2. Natural or man-made contamination of the Water supply source(s).

Requirements for termination B Stage 5 of the Drought Contingency Plan may be rescinded when all of the triggering events have ceased to exist for a period of 3 consecutive days.

**VII. Goals for Reduction in Water Use**

The City of Midland has established quantifiable goals for water use reduction for each stage of the Drought Contingency Plan. These goals are outlined below.

**Stage 1, Mild**

Goal: Achieve a voluntary 10 percent reduction in daily Water demand

**Stage 2, Moderate**

Goal: Achieve 15 percent reduction in daily Water demand

**Stage 3, Severe**

Goal: Achieve 20 percent reduction in daily Water demand.

**Stage 4, Critical**

Goal: Achieve 25 percent reduction in daily Water demand

**Stage 5, Emergency**

Goal: Achieve a 30 day sustainable demand level which well fields can provide 23 MGD.

**VIII. Drought and Emergency Response Stages**

The City Manager, or his/her designee, shall monitor Water supply and/or demand conditions on a daily basis and, in accordance with the triggering criteria set forth in Section VIII of the Plan, shall determine that a mild, moderate, severe, critical, or emergency condition exists and shall implement the following actions upon publication of notice in a newspaper of general circulation:

**Stage 1 - Mild Water Shortage Conditions ☐**

Supply Management Measures:

To manage limited Water supplies and/or reduce Water demand, the City of Midland shall implement the following measures; reduced flushing of Water mains and increased use of alternative supply source(s) if available.

Voluntary Water Use Restrictions:

- a) Water customers are requested to voluntarily limit the irrigation of landscaped areas to days and times designated by the City manager or his/her designee.
- b) All operations of the City of Midland and its employees shall adhere to Water use restrictions prescribed and shall be considered governmental functions.
- c) Water customers are requested to practice Water conservation and to minimize or discontinue Water use for non-essential purposes.

**Stage 2 - Moderate Water Shortage Conditions ☐**

Supply Management Measures:

In order to manage limited Water supplies and/or reduce Water demand, the City of Midland shall implement the following measures: reduced flushing of Water mains, reduced irrigation of public landscaped areas; increased use of an alternative supply source(s).

Water Use Restrictions. Under threat of penalty for violation, the following Water use restrictions shall apply to all persons:

- a) Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems shall be limited to days and times designated by the City Manager or his/her designee. However, irrigation of landscaped areas is permitted at anytime if it is by means of a hand-held hose, a faucet filled bucket or watering can of five (5) gallons or less, or drip irrigation system.

b) Use of Water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is prohibited except on designated watering days between the hours of 6:00 p.m. and 10:00 a.m. beginning on their designated watering days. Such washing, when allowed, shall be done with a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

c) Use of Water to fill, refill, or add to any indoor or outdoor swimming pools, wading pools, or Jacuzzi-type pools is prohibited except on designated watering days between the hours of 6:00 p.m. and 10:00 a.m. beginning on their designated watering days.

d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

e) Use of Water from hydrants shall be limited to fire fighting, related activities, or other activities necessary to maintain public health, safety, and welfare, or activities deemed to be governmental functions undertaken by the City of Midland or its officials, agents, employees or independent contractors.

f) Use of Water for the irrigation of golf course greens, tees, and fairways is prohibited except on designated watering days between the hours 6:00 p.m. and 10:00 a.m. beginning on their designated watering days. However, if the golf course utilizes a water source other than that provided by the City of Midland, the facility shall not be subject to these regulations.

g) All restaurants are prohibited from serving Water to its patrons except when requested.

h) The following uses of Water are defined as non-essential and are prohibited:

1. Wash down of any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
2. Use of Water to wash down buildings or structures for purposes other than immediate fire protection;
3. Use of Water for dust control;
4. Flushing gutters or permitting Water to run or accumulate in any gutter or street; and
5. Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s).

### **Stage 3 - Severe Water Shortage Conditions**

#### **Supply Management Measures:**

In order to manage limited Water supplies and/or reduce Water demand, the City of Midland shall implement the following measures: reduced flushing of water mains, reduced irrigation of public landscaped areas to minimum required to avoid vegetation loss; increased use of an alternative supply source(s).

**Water Use Restrictions.** All requirements of Stage 2 shall remain in effect during Stage 3 except: a) Irrigation of landscaped areas shall be limited to days and times designated by the City Manager or his designee and shall be by means of hand-held hoses, hand-held buckets, drip irrigation, or permanently installed automatic sprinkler system only. The use of hose-end sprinklers is prohibited at all times. b) The watering of golf course tees is prohibited unless the golf course utilizes a water source other than that provided by the City of Midland.

### **Stage 4 - Critical Water Shortage Conditions**

#### **Supply Management Measures:**

In order to manage limited Water supplies and/or reduce Water demand, the City of Midland shall implement these measures: reduced or discontinued flushing of water mains except emergencies reduced or discontinued irrigation of public landscaped areas; increased use of an alternative supply source(s):

**Water Use Restrictions.** All requirements of Stage 2 and 3 shall remain in effect during Stage 4 except:

- a) Irrigation of landscaped areas shall be limited to days and times designated by the City Manager or his designee and shall be by means of hand-held hoses, hand-held buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
- b) Use of Water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle not occurring in a commercial car wash and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes shall occur only between the hours of 8:00 a.m. and 6:00 p.m.
- c) The filling, refilling, or adding of Water to swimming pools, wading pools, and Jacuzzi-type pools is prohibited.
- d) Operation of any ornamental fountain or pond for aesthetic or scenic purposes is prohibited except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

- e) No applications for new, additional, expanded, or increased-in-size Water service connections, meters, service lines, pipeline extensions, mains, or Water service facilities of any kind shall be allowed or approved.

#### **Stage 5 - Emergency Water Shortage Conditions**

##### **Supply Management Measures:**

The City of Midland shall discontinue flushing of water mains, discontinue irrigation of public landscaped areas; use an alternative supply source(s).

**Water Use Restrictions.** All requirements of Stage 2, 3, and 4 shall remain in effect during Stage 5 except:

- a) Irrigation of landscaped areas is absolutely prohibited.
- b) Use of Water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle is absolutely prohibited.

- IX. Enforcement**
- a) No person shall use or allow the use of Water from the City of Midland for residential, commercial, industrial, agricultural, governmental, or any other purpose in a manner contrary to any provision of this Plan, or in an amount in excess of that permitted by the drought response stage in effect at the time pursuant to action taken by the City Manager, or his/her designee, in accordance with provisions of this Plan.
  - b) Any person who violates this Plan is guilty of a misdemeanor and, upon conviction shall be punished by a fine of not more than five hundred (\$500) dollars. Each day that one or more of the provisions in this Plan is violated shall constitute a separate offense. If a person is convicted of three or more violations of this Plan, the City Manager shall, upon due notice to the customer, be authorized to discontinue Water service to the premises where such violations occur. Services discontinued under such circumstances shall be restored only upon payment of re-connection charge, established by City policy, and any other costs incurred by the City of Midland in discontinuing service. In addition, suitable assurance must be given to the City Manager that the same action shall not be repeated while the Plan is in effect. Compliance with this plan may also be sought in any court of competent jurisdiction.
  - c) Any person, including a person classified as a Water customer of the City of Midland, in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to present evidence that he/she did not commit the violation.
  - d) In any prosecution charging a violation of this Ordinance at a single family residence, proof that the defendant named in the complaint was at the time of such violation shown in the City of Midland Customer Service Records to be the occupant or customer of the premises shall constitute in evidence a prima facie presumption that said person used or allowed the use of Water in violation of this Ordinance.

e) Any police officer of the City of Midland, or other employee of the City of Midland designated by the City Manager, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall provide direction as to how to respond or appeal. The alleged violator shall be served a copy of the citation. Service of the citation shall be complete upon delivery of the citation to the alleged violator, or to an agent or employee of a violator. The alleged violator shall appear in municipal court to enter a plea of guilty, not guilty or no contest for the violation of this Plan. If the alleged violator fails to appear in municipal court, a warrant for his/her arrest may be issued. A summons to appear may be issued in lieu of an arrest warrant.

#### **X. Variances**

The City Manager, or his/her designee, may, in writing, grant a temporary variance for existing Water uses otherwise prohibited under this Plan if it is determined that failure to grant such variance would cause an emergency condition adversely affecting the health, sanitation, or fire protection for the public or the person requesting such variance and if one or more of the following conditions are met:

- a) Compliance with this Plan cannot be technically accomplished during the duration of the Water supply shortage or other condition for which the Plan is in effect.
- b) Alternative methods can be implemented which will achieve the same level of reduction in Water use.

Persons requesting an exemption from the provisions of this Ordinance shall file a petition for variance with the City of Midland within 5 days after the Plan or a particular drought response stage has been invoked. All petitions for variances shall be reviewed by the City Manager, or his/her designee, and shall include the following:

1. Name and address of the petitioner(s).
2. Purpose of Water use.
3. Specific provision(s) of the Plan from which the petitioner is requesting relief.
4. Detailed statement as to how the specific provision of the Plan adversely affects the petitioner or what damage or harm will occur to the petitioner or others if petitioner complies with this Ordinance.
5. Description of the relief requested.
6. Period of time for which the variance is sought.

7. Alternative Water use restrictions or other measures the petitioner is taking or proposes to take to meet the intent of this Plan and the compliance date.
8. Other pertinent information.

Variations granted by the City of Midland shall be subject to the following conditions, unless waived or modified by the City Manager or his/her designee:

- a) Variations granted shall include a timetable for compliance.
- b) Variations granted shall expire when the Plan is no longer in effect, unless the petitioner has failed to meet specified requirements.
- c) A person who receives a variance shall file the variance with the City of Midland Municipal Court within 72 hours of the granting of said variance.

No variance shall be retroactive or otherwise justify any violation of this Plan occurring prior to the issuance of the variance. Temporary variations may be granted by the same authority at any time during the execution of this plan upon submission of the information requested above. These variations will not exceed 30 days and must be approved prior to the deviation from the plan otherwise a violation will result.

#### **XI. Review and Update of Drought Contingency Plan**

This drought contingency plan will be updated at least every 5 years as required by TCEQ regulations.

#### **XII. Judicial Notice**

- a) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall, take judicial notice of this Ordinance.
- b) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall, take judicial notice of records in the City's Customer Service Division.
- c) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall, take judicial notice of the Drought and Emergency Response Stage in effect on the date of the alleged violation(s).
- d) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall, take judicial notice of the City of Midland wholesale water purchase contract with the Colorado River Municipal Water District and any notices received requesting initiation of the Drought Contingency Plan.
- e) The City of Midland Municipal Court upon its own motion may, or upon the motion of a party shall, take judicial notice of the City Manager's designation of the Drought and Emergency Response Stage in effect on the date of the alleged violation(s).

**XIII. Affirmative Defenses** In any prosecution for the violation of any provision of this Ordinance, it shall not be required or necessary for the complaint to negate or for the state to prove any exception contained in this Ordinance concerning any prohibited act. Provided, however, that any such exception made in this Ordinance is an affirmative defense to prosecution under this Ordinance, and may be urged as an affirmative defense by the person charged by such complaint as authorized by Section 2.04 of the Texas Penal Code. It is an affirmative defense to prosecution under this Ordinance that the Water used is not City of Midland Water.

**XIV. Authority of Municipal Court** Nothing in this Ordinance shall be construed to limit the City of Midland Municipal Court's authority and remedies.

## Appendix A

### Definitions:

For the purposes of this Plan, the following definitions shall apply:

Aesthetic water use: Water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Commercial and institutional water use: Water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

Conservation: those practices, techniques, and technologies that 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 supply is conserved and made available for future or alternative uses.

CRMWD: The Colorado River Municipal Water District. They supply surface Water wholesale to the City of Midland.

Customer: any person, company, or organization using Water supplied by City of Midland.

Domestic water use: Water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Even number address: street addresses, box numbers, or rural postal route numbers ending in 0, 2, 4, 6, or 8 and locations without addresses.

Industrial water use: the use of Water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: Water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-way and medians.

Non-essential water use: Water uses that are not essential nor required for the protection of public, health, safety, and welfare, including:

- Irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Plan;
- e) Use of Water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
- f) Use of Water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas;
- g) Use of Water to wash down buildings or structures for purposes other than immediate fire protection;
- h) Flushing gutters or permitting Water to run or accumulate in any gutter or street;
- i) Use of Water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;

- j) Use of Water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;
- k) Failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such leak(s); and
- l) Use of Water from hydrants for construction purposes or any other purposes other than fire fighting.

Odd numbered address: street addresses, box numbers, or rural postal route numbers ending in 1, 3, 5, 7, or 9.

Water: For the purposes of this Drought Contingency Plan, the term "Water" shall mean water from the City of Midland used for residential, commercial, industrial, agricultural or governmental purposes. The term Water shall not include water from a private well.

## Appendix B

### ENVIRONMENTAL QUALITY

(a)	PART 1 CHAPTER 288	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
A	SUBCHAPTER B	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS DROUGHT CONTINGENCY PLANS Drought Contingency Plans for Municipal Water Suppliers
	RULE 288.20	

drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.

- (1) Minimum requirements. Drought contingency plans must include the following minimum elements.
  - (A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. 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.
  - (B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.
  - (C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.
  - (D) 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.
  - (E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:
    - (i) reduction in available water supply up to a repeat of the drought of record;
    - (ii) water production or distribution system limitations;
    - (iii) supply source contamination; or
    - (iv) system outage due to the failure or damage of major water system components (e.g., pumps).
  - (F) 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 subparagraph are not enforceable.
  - (G) 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:
    - (i) curtailment of non-essential water uses; and
    - (ii) utilization of alternative water sources and/or alternative delivery mechanisms 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.).
  - (H) The drought contingency plan must include the procedures to be followed for the initiation or

termination of each drought response stage, including procedures for notification of the public.

(I) The drought contingency plan must include procedures for granting variances to the plan.

(J) The drought contingency plan must include procedures for the enforcement of mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.

(2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.

(3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.

(b) A wholesale or retail 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 retail 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 the adoption or revision of the regional water plan.

# Appendix C

## List of References

Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter B, Rule 288.20.

L:\Contracts\Utilities\2014\DRoughtContingencyPlan.Doc



# City Council Agenda

Approved for Agenda:  
RPatrick  
City Manager's Office

**MEETING DATE:** 8/12/2014  
**TO:** City Council / City Manager  
**FROM:** Holly McGrath-Rosas, Assistant Director of Utilities  
**SUBJECT:** Consider an amendment to the current Ordinance updating the City of Midland's Drought Contingency Plan

---

**Purpose:**

Consider an amendment to the current Ordinance updating the City of Midland's Drought Contingency Plan

**Recommended City Council Action**

Approve  Deny  Directional / Informational

**Fiscal Impact:**

No Fiscal Impact.

**Discussion:**

The Texas Commission on Environmental Quality (TCEQ) requires our Drought Contingency Plan to be updated every five years.

RESOLUTION NO. 2015-307

RESOLUTION AMENDING THE WATER  
CONSERVATION PLAN FOR THE CITY OF MIDLAND,  
TEXAS

WHEREAS, the City, by resolution No. 2009-092, adopted the current Water Conservation Plan in 2009; and

WHEREAS, Section 13.146 of the Texas Water Code requires water conservation plans to be reviewed and updated every five years; and

WHEREAS, the City Council finds it to be in the public interest for the City to amend the Water Conservation Plan for the City of Midland, Texas, so as to comply with legislative requirements;

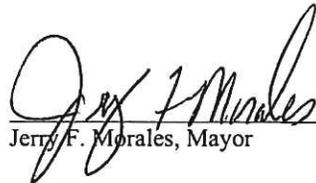
NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MIDLAND, TEXAS:

THAT the Water Conservation Plan for the City of Midland, Texas, is hereby amended, said plan being on file in the City Secretary's office referenced by the date and number of this resolution.

On motion of Council member Love, seconded by Council member Lacy, the above and foregoing resolution was adopted by the City Council of the City of Midland at a regular meeting on the 8th day of September, A.D., 2015, by the following vote:

Council members voting "AYE": Hotchkiss, Love, Sparks, Morales, Dufford, Lacy, Robnett

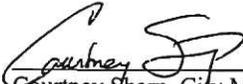
Council members voting "NAY": None

  
\_\_\_\_\_  
Jerry F. Morales, Mayor

ATTEST:

  
\_\_\_\_\_  
Amy M. Turner, City Secretary

RECOMMENDED AND APPROVED:

  
\_\_\_\_\_  
Courtney Sharp, City Manager

APPROVED AS TO CONTENT  
AND COMPLETENESS:

  
\_\_\_\_\_  
Laura Wilson, Director of Utilities

APPROVED ONLY AS TO FORM:

  
\_\_\_\_\_  
John Ohnemiller, City Attorney



# City Council Agenda

**APPROVED**

Approved for Agenda:  
rwpatrick  
City Manager's Office

**MEETING DATE:** 8/25/2015

**TO:** City Council / City Manager

**FROM:** Laura R. Wilson, P.E., Director of Utilities

**SUBJECT:** Consider a resolution amending the current Water Conservation Plan for the City of Midland.

---

**Purpose:**

Consider a resolution amending the current water conservation plan for the City of Midland.

**Recommended City Council Action**

Approve  Deny  Directional / Informational

**Fiscal Impact:**

No additional fiscal impact.

**Discussion:**

During the 2007 Legislative Session, Section 13.146 of the Texas Water Code requirements were developed for the submission of water conservation plans. These plans were required to be adopted and submitted prior to May 1, 2009. The City's current conservation plan was adopted April 14, 2009. This took the place of the previous plan adopted by resolution 2005-121 in April of 2005. In addition to the requirement for a conservation plan the code also requires the plan to be reviewed and updated once every five years thereafter and for the entity to report annually on the progress of program implementation. The current amendment requested to the conservation plan is the required update mandated every five years.

**WATER CONSERVATION PLAN  
FOR THE  
CITY OF MIDLAND, TEXAS**

**August, 2015**

## **Water Conservation Plan for City of Midland**

**August, 2015**

### **TABLE OF CONTENTS**

1. INTRODUCTION AND OBJECTIVES
2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES
3. WATER UTILITY PROFILE
4. SPECIFICATION OF WATER CONSERVATION GOALS
  - 4.1 QUANTITATIVE FIVE AND TEN YEAR GOALS
5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR
  - 5.1 Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement
  - 5.2 Record Management System
  - 5.3 Determination and Control of Unaccounted Water
  - 5.4 Leak Detection and Repair
  - 5.5 Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report
6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN
7. WATER RATE STRUCTURE
8. OTHER WATER CONSERVATION MEASURES
  - 8.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures
  - 8.2 Reservoir System Operation Plan
  - 8.3 Considerations for Landscape Water Management Regulations (Optional)
  - 8.4 Requirement for Water Conservation Plans by Wholesale Customers
  - 8.5 Coordination with Regional Water Planning Group
  - 8.6 Current Conservation Measures
9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN

**APPENDICES**

APPENDIX A	List of References
APPENDIX B	Texas Commission on Environmental Quality Rules on Municipal Water Conservation Plans
APPENDIX C	Form for Water Utility Profile
APPENDIX D	Sample Water Conservation Report

## **Water Conservation Plan for City of Midland**

### **1. OBJECTIVES**

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation plans for public water suppliers.

The objectives of this water conservation plan are as follows:

- To reduce water consumption from the levels that would prevail without conservation efforts.
- To reduce the loss and waste of water.
- To improve efficiency in the use of water.
- To document the level of recycling and reuse in the water supply.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The water conservation plan presented in this document includes all of the elements required by TCEQ. It includes the following:

- A water utility profile;
- Five- year and ten-year goals for per capita water use;
- A continuous program of leak protection, repair and water loss accounting;
- A program of continuing education and information regarding water conservation; and
- An ordinance approving the plan.

## **2 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES**

### **2.1 Conservation Plans**

The TCEQ rules governing development of water conservation plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code, which is included in Appendix B. For the purpose of these rules, a water conservation plan is defined 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<sup>1</sup>.” The elements in the TCEQ water conservation rules covered in this conservation plan are listed below.

#### Minimum Conservation Plan Requirements

The minimum requirements in the Texas Administrative Code for Water Conservation Plans for Public Water Suppliers are covered in this report as follows:

- 288.2(a)(1)(A) – Utility Profile – Section 3 and Appendix C
- 288.2(a)(1)(B) – Specification of Goals – Section 4
- 288.2(a)(1)(C) – Five and Ten Year Goals for Water Savings – Section 4.1
- 288.2(a)(1)(D) – Accurate Metering – Section 5.1
- 288.2(a)(1)(E) – Universal Metering – Section 5.1
- 288.2(a)(1)(F) – Determination and Control of Unaccounted Water – Section 5.3
- 288.2(a)(1)(G) – Public Education and Information Program – Section 6
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 7
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 8.2
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 9
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Group – Section 8.5

#### Conservation Additional Requirements (Population over 5,000)

The Texas Administrative Code includes additional requirements for water conservation plans for cities with a population over 5,000:

- 288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Sections 5.3, 5.4, and 5.5
- 288.2(a)(2)(B) – Record Management System – Section 5.2
- 288.2(a)(2)(C) – Requirement for Water Conservation Plans by Wholesale Customers – Section 8.4

#### Additional Conservation Strategies

TCEQ rules also list additional optional but not required conservation strategies, which may be adopted by suppliers. The following optional strategies are included in this plan:

- 288.2(a)(3)(A) – Conservation Oriented Water Rates – Section 7

---

<sup>1</sup> Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.2, and Subchapter B, Rule 288.20, downloaded from <http://texreg.sos.state.tx.us/public/>.

- 288.2(a)(3)(B) – Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures – Section 8.1
- 288.2(a)(3)(F) – Considerations for Landscape Water Management Regulations – Section 8.3
- 288.2(a)(3)(G) – Monitoring Method – Section 5.5

### **3. WATER UTILITY PROFILE**

Appendix C to this water conservation plan is a City of Midland water utility profile based on the format recommended by the TCEQ.

### **4. SPECIFICATION OF WATER CONSERVATION GOALS**

The goals for this water conservation plan include the following:

- Strive to attain the per capita municipal water use below the specified amount in gallons per capita per day shown on Table C-1 using a 5-year rolling average calculation. (See 5-year and 10-year goals in Appendix C)
- Conduct water audits as required by the TCEQ and maintain unaccounted for water to ten (10) percent of the total water used through existing and new maintenance programs.
- Raise public awareness of water conservation and encourage responsible public behavior by a public education and information program, as discussed in Section 6.

#### **4.1 QUANTITATIVE FIVE AND TEN YEAR GOALS**

Effective May 1, 2005 Water Conservation plans must include quantitative five and ten year goals for water savings to include goals for water loss programs and goals for “municipal use in gallons per capita per day”.

### **5. METERING, WATER USE RECORDS, CONTROL OF UNACCOUNTED WATER, AND LEAK DETECTION AND REPAIR**

One of the key elements in water conservation is careful tracking of water use and control of losses through illegal diversions and leaks. Careful metering of water deliveries and water use, detection and repair of leaks in the distribution system and regular monitoring of unaccounted water are important in controlling losses.

### **5.1 Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement**

All customers of the City of Midland are metered.

The City tests and replaces their customer meters on a regular basis. All customer meters are replaced on an 8-year cycle.

### **5.2 Record Management System**

Within the next five years, as required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(B), the record management system will allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories. This information will be included in an annual water conservation report, as described in Section 5.5 below.

The present record management system does not separate water sales and uses by category.

### **5.3 Determination and Control of Unaccounted Water**

Unaccounted water is the difference between water delivered to customers and metered deliveries to customers plus authorized but unmetered uses. (Authorized but unmetered uses would include use for fire fighting, releases for flushing of lines, and uses associated with new construction.) Unaccounted water can include several categories:

- Inaccuracies in customer meters (Customer meters tend to run more slowly as they age and under-report actual use.);
- Accounts which are being used but have not yet been added to the billing system;
- Losses due to water main breaks and leaks in the water distribution system;
- Losses due to illegal connections and theft; and
- Other.

Measures to control unaccounted water are part of the routine operations of water suppliers. Water audits are useful methods of accounting for water usage within a system. Water audits will be conducted by water suppliers in order to decrease water loss. Maintenance crews and personnel will look for and report evidence of leaks in the water distribution system. The leak detection and repair program is described in Section 5.5 below. Meter readers are asked to watch for and report signs of illegal connections, so they can be addressed quickly. Unaccounted water calculated as part of the utility profile and is included in Appendix C.

#### **5.4 Leak Detection and Repair**

City crews and personnel will look for and report evidence of leaks in the water distribution system. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement as funds are available.

#### **5.5 Monitoring of Effectiveness and Efficiency - Annual Water Conservation Report**

*[Appendix D is a form that will be used in the development of an annual water conservation report for water suppliers.]*

An annual conservation report will be completed by May 1 of each year and will be used to monitor the effectiveness and efficiency of the water conservation program and to plan conservation-related activities for the next year. This report will record the water use by category, per capita municipal use, and unaccounted water for the current year and compares them to historical values.

### **6. CONTINUING PUBLIC EDUCATION AND INFORMATION CAMPAIGN**

The continuing public education and information campaign on water conservation includes the following elements:

- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Partnership with Keep Midland Beautiful to ensue conservation efforts and education.
- Make water conservation brochures and other water conservation materials available to the public.
- The City of Midland's website has a Water Conservation link, making information on water conservation and watering schedules available to the public.
- Provide water conservation materials to schools on request and utilize existing age-appropriate education programs available through the TCEQ and TWDB facilitated through Keep Midland Beautiful.
- Support the State-initiated Water Conservation Awareness and Education Campaign.

## **7. WATER RATE STRUCTURE**

An increasing block rate water structure that is intended to encourage water conservation and discourage excessive use and waste of water will be adopted upon completion of the next rate study or within five years. The City of Midland water rate structure is as follows:

### Residential Rates

1. Monthly minimum charge of \$18.38 per unit for Residential and \$14.96 per unit for Apartments. This includes up to 2,000 gallons water use with no additional charge.
2. Between 2,000 gallons and 10,000 gallons the cost is \$5.20 per 1,000 gallons.
3. Between 10,000 gallons and 25,000 gallons the cost is \$6.83 per 1,000 gallons.
4. Between 25,000 gallons and 50,000 gallons the cost is \$9.19 per 1,000 gallons.
5. Beyond 50,000 gallons the cost is \$45.94 per 1,000 gallons.

### Commercial/Industrial Rates

Commercial/industrial rates are the same as the residential rates up to the 50,000 gallons. Beyond 50,000 the cost is \$9.19 per 1,000 gallons

## **8. OTHER WATER CONSERVATION MEASURES**

### **8.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures**

The City of Midland currently has adopted the 2012 International Plumbing and will have the 2015 International Plumbing Code (IPC) adopted effective January 1, 2016. The City of Midland Plumbing Code requires a water-conserving fixture which includes requirements for maximum flows of 2.5 gpm for faucets, 3.0 for showerheads and 1.6 gallons per flush for toilets. These flow requirements are mandated by nationally recognized standards. In addition, water using appliances like washing machines and dishwashers meet higher efficiency standards. The potential water reduction from these fixtures and appliances can be significant, but historically have been difficult to measure. Also, this code allows the use of gray water systems for flushing of water closets and urinals and subsurface landscape irrigation. The use of gray water has not become prevalent however due the code recognition of installation it could lead to additional water usage reduction.

### **8.2 Reservoir System Operation Plan**

The City of Midland purchases water from the Colorado River Municipal Water District (CRMWD) and does not have surface water supplies for which to implement a reservoir system operation plan.

**8.3 Considerations for Landscape Water Management Regulations (Optional)**

The City of Midland has chosen not to adopt a Landscape Ordinance. The City has guidance information available to the public.

**8.4 Requirement for Water Conservation Plans by Wholesale Customers**

The City of Midland has no wholesale customers.

**8.5 Coordination with Regional Water Planning Group**

In accordance with TCEQ regulations, a copy of this adopted water conservation plan will be sent to the Region F Water Planning Group.

**8.6 Current Conservation Measures**

The City of Midland (City) in 2014 completed the MBR Satellite Reclaimed Water Production Facility (Facility) to provide reuse irrigation water to Midland College. The reuse water will save 120 homes worth of potable water, on the average of 150,000 to 200,000 daily.

The City's Facility has a capacity of 0.20 MGD and diverts wastewater from an existing 33-inch sewer line routed to the City's Water Pollution Control Plant (WPCP). The Facility primarily produces reclaimed water for irrigation use at Midland College as well as other uses authorized by the Texas Commission on Environmental Quality (TCEQ). These include using reclaimed water for irrigation of landscape, public parks, schoolyards, athletic fields, and golf courses; maintenance of any off channel ponds; and for soil compaction or dust control.

The City will continue its conservation efforts, including the current Stage 2 Drought water restrictions. We will continue to expand efforts by working with the City's Parks Department and public education.

**9. IMPLEMENTATION AND ENFORCEMENT OF THE WATER CONSERVATION PLAN**

A copy of the resolution adopted by the City Council regarding this water conservation plan is attached to and made part of this plan. The official responsible for the implementation of the Water Conservation Plan is Laura R. Wilson, P.E., Director of Utilities.

---

**Appendix A**  
**List of References**

**Appendix A**  
**List of References**

- (1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rules 288.1 and 288.2, and Subchapter B, Rule 288.20, downloaded from <http://texreg.sos.state.tx.us/public/>.

The following conservation plans and related documents were reviewed in the development of this plan.

- (2) Texas Commission on Environmental Quality Water Conservation Planning, downloaded from [https://www.tceq.texas.gov/permitting/water\\_rights/wr\\_technical-resources/conserv.html](https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/conserv.html).
- (3) City of Midland Water Conservation Plan: adopted by the City Council, Midland, April 14, 2005, Resolution 2009-092.
- (4) Texas Water Development Board: Report 362, "Water Conservation Best Management Practices." <http://www.twdb.texas.gov/conservation/BMPs/index.asp>.

---

**Appendix B**  
**Texas Commission on Environmental Quality Rules on Municipal Water**  
**Conservation Plans**

**APPENDIX B**

**Texas Administrative Code**

<b><u>TITLE 30</u></b>	<b>ENVIRONMENTAL QUALITY</b>
<b><u>PART 1</u></b>	<b>TEXAS COMMISSION ON ENVIRONMENTAL QUALITY</b>
<b><u>CHAPTER 288</u></b>	<b>WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS</b>
<b><u>SUBCHAPTER A</u></b>	<b>WATER CONSERVATION PLANS</b>
<b><u>RULE §288.2</u></b>	<b>Water Conservation Plans for Municipal Uses by Public Water Suppliers</b>

---

(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph. Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph:

- (i) residential;
  - (I) single family;
  - (II) multi-family;
- (ii) commercial;
- (iii) institutional;
- (iv) industrial;
- (v) agricultural; and
- (vi) wholesale.

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) 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 in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(K) documentation of coordination with the regional water planning groups for the service area of the public water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

(B) a requirement in every wholesale water supply contract entered into or renewed

after official adoption of the plan (by either ordinance, resolution, or tariff), 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 in this chapter. If the customer intends to resell the water, 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 the provisions of this chapter.

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

(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) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

(D) reuse and/or recycling of wastewater and/or graywater;

(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;

(F) a program and/or ordinance(s) for landscape water management;

(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and

(H) any other water conservation practice, method, or technique which the water supplier shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a

August, 2015

memorandum of understanding between the commission and the Texas Water Development Board.

(c) A public water supplier for municipal use 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. The public water supplier for municipal use shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

---

**Appendix C**  
**Water Utility Profile**

APPENDIX C  
Water Utility Profile Based on TCEQ Format

The purpose of the Water Utility Profile is to assist an applicant with water conservation plan development and to ensure that important information and data be considered when preparing your water conservation plan and goals. You may contact the Municipal Water Conservation Unit of the TWDB at 512-936-2391 for assistance, or the Resource Protection Team at 512-239-4691 if submitted to the TCEQ.

Name of Utility:	City of Midland
Address & Zip:	P.O. Box 1152, Midland, Texas 79702
Telephone Number:	432-685-7260
Fax Number:	432-685-5056
Form Completed by:	Holly McGrath-Rosas
Title:	Assistant Director of Utilities
Signature:	<hr/>
Date:	26-AUG-2015

Name and phone number of person/department responsible for implementing a water conservation program:

Name:	Laura R. Wilson, P.E., Director of Utilities
Phone Number:	432-685-7260

I. CUSTOMER DATA

A. Population and Service Area Data

1. Please attach a copy of your Certificate of Convenience (CCN) from the TCEQ, and a service- area map. Attachment I

2. Water Utility Profile, Appendix C

B. Complete the following in gallons per capita per day (GPCD) to quantify the water conservation goals for the utility's service area:

C. Estimation of the technical potential for reducing per capita water use

Table C-1

Method	Most Likely Savings 5-Year (GPCD)	Most Likely Savings 10-Year (GPCD)
Reduction in unaccounted-for uses	0.3	0.3
Reduction in indoor water use due to water- Conserving plumbing fixtures	0.3	0.3
Reduction in seasonal use	3.5	3.5
Reduction in water use due to public education	1.5	1.5
Total Technical Potential for Reducing per Capita Water Use	5.5	5.5

\* Subtract these totals from the dry-year per capita use to calculate the long-run planning goal.

D. Planning Goal

The planning goal equals the dry-year per capita water use minus the total technical potentials calculated in number one above.

	5-Year	10-Year
Planning goal (in GPCD)	180.0	175.0
Goal to be achieved by year:	2020	2025

E. Needed reduction in per capita use to meet planning goal (GPCD)

	5- Year	10-Year
Dry-year per capita use:	186	180
Planning goal (from #2 above):	180	175
Difference between current use and goal:	6	5

(Represents needed reduction in per capita use to meet goal.)

## UTILITY PROFILE FOR RETAIL WATER SUPPLIER

Fill out this form as completely as possible.  
If a field does not apply to your entity, leave it blank.

### CONTACT INFORMATION

Name of Utility: City of Midland Water Purification Plant

Public Water Supply Identification Number (PWS ID): 1650001

Certificate of Convenience and Necessity (CCN) Number: 10221

Surface Water Right ID Number: NA

Wastewater ID Number: Permit # WQ0010223001

Completed By: Holly McGrath-Rosas Title: Assistant Utilities Director

Address: 300 N. Loraine Street City: Midland Zip Code: 79702

Email: [REDACTED] Telephone Number: 432-685-7261

Date: 8-13-2015

Regional Water Planning Group: F Map

Groundwater Conservation District: NA Map

Check all that apply:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

## Section I: Utility Data

### A. Population and Service Area Data

- Current service area size in square miles: 123,933  
 (Attach or email a copy of the service area map.)
- Provide historical service area population for the previous five years, starting with the most current year.

Year	Historical Population Served By Retail Water Service	Historical Population Served By Wholesale Water Service	Historical Population Served By Wastewater Service
2010	111,252	0	111,252
2011	113,903	0	113,903
2012	119,665	0	119,665
2013	123,933	0	123,933
2014	128,894	0	128,894

- Provide the projected service area population for the following decades.

Year	Projected Population Served By Retail Water Service	Projected Population Served By Wholesale Water Service	Projected Population Served By Wastewater Service
2020	144,839	0	144,839
2030	185,406	0	185,406
2040	237,335	0	237,335
2050	303,901	0	303,901
2060	388,901	0	388,901

- Describe the source(s)/method(s) for estimating current and projected populations.

List source(s)/method(s) for the calculation of current and projected population:  
 Current: 2012 population given by Census Bureau; and the City's Comprehensive Plan, Tall City Tomorrow using a growth was an average of 2.5% this rate is used to adjust for periods of oil booms.

**B. System Input**

Provide system input data for the previous five years.

Total System Input = Self-supplied + Imported – Exported

Year	Self-supplied Water in Gallons	Purchased/Imported Water in Gallons	Exported Water in Gallons	Total System Input	Total GPCD
2010	2,414,802,000	6,545,347,000	0	8,960,149,000	221
2011	1,806,190,000	6,826,159,000	0	8,632,349,000	208
2012	1,096,022,000	4,127,698,000	0	5,223,720,000	120
2013	1,102,277,000	4,838,661,000	0	5,940,938,000	131
2014	2,487,708,000	4,403,024,000	0	6,890,732,000	146
Historic 5-year Average	1,781,399,800	5,348,177,800	0	7,129,577,600	165

**C. Water Supply System (Attach description of water system)**

1. Designed daily capacity of system \_\_\_\_\_ 62 gallons per day.
2. Storage Capacity:  
 Elevated \_\_\_\_\_ 8,000,000 gallons  
 Ground \_\_\_\_\_ 27,000,000 gallons
3. List all current water supply sources in gallons.

Water Supply Source	Source Type*	Total Gallons
CRMWD	Contract	6,570,000,000
Paul Davis	Ground	730,000,000
MFWSD#1 (Tbar)	Contract	3,650,000,000
	Choose One	
	Choose One	
	Choose One	

\*Select one of the following source types: *Surface water, Groundwater, or Contract*

4. If surface water is a source type, do you recycle backwash to the head of the plant?  
 Yes \_\_\_\_\_ estimated gallons per day  
 No

**D. Projected Demands**

1. Estimate the water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demands (gallons)
2020	144,839	7,969,663,758
2030	185,406	9,759,237,450
2040	237,335	11,494,069,174
2050	303,809	13,174,277,220
2060	388,901	14,799,500,718

2. Describe sources of data and how projected water demands were determined. Attach additional sheets if necessary.

Based of of City of Midland data and the Region F Water Planning Group.

**E. High Volume Customers**

- List the annual water use, in gallons, for the five highest volume **RETAIL** customers. Select one of the following water use categories to describe the customer; choose Residential, Industrial, Commercial, Institutional, or Agricultural.

Retail Customer	Water Use Category*	Annual Water Use	Treated or Raw
City of Midland	Commercial	173,612,000	Treated
MISD	Commercial	84,450,000	Treated
Midland Memorial Hospital	Commercial	66,866,000	Treated
Midland College	Commercial	61,866,000	Treated
Midland County	Commercial	29,783,000	Treated

\*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

- If applicable, list the annual water use for the five highest volume **WHOLESALE** customers. Select one of the following water use categories to describe the customer; choose Municipal, Industrial, Commercial, Institutional, or Agricultural.

Wholesale Customer	Water Use Category*	Annual Water Use	Treated or Raw
	Choose One		Choose One
	Choose One		Choose One
	Choose One		Choose One
	Choose One		Choose One
	Choose One		Choose One

\*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

**F. Utility Data Comment Section**

Provide additional comments about utility data below.

The City's data tracking system was purchased for, and is currently used for, customer billing, not this type of reporting. Some of the data had to be interpolated to provide some of these responses. The City is making efforts to ensure information is documented and put in a form that is usable for tracking and reporting.

## Section II: System Data

### A. Retail Connections

- List the active retail connections by major water use category.

Water Use Category*	Active Retail Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Residential – Single Family	42,357		42,357	95%
Residential – Multi-family (units)			0	0%
Industrial			0	0%
Commercial	2,413		2,413	5%
Institutional			0	0%
Agricultural			0	0%
<b>TOTAL</b>	<b>44,770</b>	<b>0</b>	<b>44,770</b>	

\*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

- List the net number of new retail connections by water use category for the previous five years.

Water Use Category*	Net Number of New Retail Connections				
	2010	2011	2012	2013	2014
Residential – Single Family			5,092	-2,429	431
Residential – Multi-family (units)					
Industrial					
Commercial					
Institutional					
Agricultural					
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>5,092</b>	<b>-2,429</b>	<b>431</b>

\*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

2. For the previous five years, enter the gallons of raw water provided to RETAIL customers.

Month	Total Gallons of Raw Retail Water				
	2010	2011	2012	2013	2014
January	491,905,000	569,517,000	430,690,000	372,669,000	435,867,000
February	417,348,000	534,758,000	423,297,000	343,301,000	415,625,000
March	558,645,000	769,396,000	501,339,000	439,704,000	527,559,000
April	671,242,000	802,126,000	436,950,000	485,148,000	602,065,000
May	774,895,000	902,330,000	417,937,000	563,285,000	666,399,000
June	1,013,241,000	925,249,000	473,370,000	585,901,000	669,425,000
July	806,646,000	879,186,000	460,432,000	564,801,000	738,557,000
August	1,089,954,000	858,661,000	484,013,000	641,892,000	733,750,000
September	1,034,320,000	774,460,000	441,360,000	590,766,000	576,671,000
October	835,186,000	669,128,000	402,644,000	553,928,000	620,875,000
November	715,772,000	525,673,000	387,746,000	449,487,000	462,856,000
December	550,995,000	412,865,000	372,942,000	350,056,000	441,083,000
<b>TOTAL</b>	<b>8,960,149,000</b>	<b>8,623,349,000</b>	<b>5,232,720,000</b>	<b>5,940,938,000</b>	<b>6,890,732,000</b>

3. Summary of seasonal and annual water use.

Water Use	Seasonal and Annual Water Use					Average in Gallons
	2010	2011	2012	2013	2014	
Summer Retail (Treated + Raw)	5,204,451,000	4,785,258,000	2,501,128,000	2,658,202,000	3,231,008,000	3,676,009,400 Syr Average
TOTAL Retail (Treated + Raw)	15,585,641,000	15,312,354,000	9,366,294,000	9,796,489,000	10,692,861,000	12,150,727,800 Syr Average

**E. Water Loss**

Provide Water Loss data for the previous five years.

$$\text{Water Loss GPCD} = [\text{Total Water Loss in Gallons} \div \text{Permanent Population Served}] \div 365$$

$$\text{Water Loss Percentage} = [\text{Total Water Loss} \div \text{Total System Input}] \times 100$$

Year	Total Water Loss in Gallons	Water Loss in GPCD	Water Loss as a Percentage
2010	1,278,812,400	31	14%
2011	366,656,800	9	4%
2012	366,678,000	8	7%
2013	498,897,000	11	8%
2014	1,038,908,000	22	15%
5-year average	709,990,440	16	10%

**B. Accounting Data**

For the previous five years, enter the number of gallons of RETAIL water provided in each major water use category.

Water Use Category*	Total Gallons of Retail Water				
	2010	2011	2012	2013	2014
Residential - Single Family	7,507,754,000	8,060,421,000	4,060,421,000	5,729,484,000	5,851,824,000
Residential - Multi-family					
Industrial					
Commercial					
Institutional					
Agricultural					
<b>TOTAL</b>	<b>7,507,754,000</b>	<b>8,060,421,000</b>	<b>4,060,421,000</b>	<b>5,729,484,000</b>	<b>5,851,824,000</b>

\*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

**C. Residential Water Use**

For the previous five years, enter the residential GPCD for single family and multi-family units.

Water Use Category*	Residential GPCD				
	2010	2011	2012	2013	2014
Residential - Single Family	232	220	126	139	186
Residential - Multi-family					

**D. Annual and Seasonal Water Use**

1. For the previous five years, enter the gallons of treated water provided to RETAIL customers.

Month	Total Gallons of Treated Retail Water				
	2010	2011	2012	2013	2014
January	395,981,000	357,856,000	364,789,000	315,223,000	299,771,000
February	272,930,000	303,887,000	360,745,000	260,845,000	289,926,000
March	418,250,000	583,233,000	424,108,000	316,747,000	353,414,000
April	477,570,000	645,246,000	356,661,000	373,514,000	405,042,000
May	594,000,000	729,184,000	337,639,000	359,651,000	290,070,000
June	792,950,000	768,529,000	363,904,000	264,217,000	189,333,000
July	674,250,000	696,190,000	341,979,000	264,347,000	426,428,000
August	827,410,000	657,443,000	377,430,000	337,044,000	473,515,000
September	666,802,000	582,759,000	325,867,000	320,297,000	282,583,000
October	564,758,000	556,106,000	304,004,000	384,970,000	327,562,000
November	533,527,000	449,234,000	289,895,000	362,914,000	235,471,000
December	407,064,000	359,338,000	286,553,000	295,782,000	229,014,000
<b>TOTAL</b>	<b>6,625,492,000</b>	<b>6,689,005,000</b>	<b>4,133,574,000</b>	<b>3,855,551,000</b>	<b>3,802,129,000</b>

**F. Peak Water Use**

Provide the Average Daily Water Use and Peak Day Water Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (peak/avg)
2010	24,000,000	42,000,000	1.75
2011	24,000,000	35,000,000	1.46
2012	15,000,000	19,000,000	1.27
2013	17,000,000	25,000,000	1.47
2014	19,000,000	32,000,000	1.68

**G. Summary of Historic Water Use**

Water Use Category	Historic 5-year Average	Percent of Connections	Percent of Water Use
Residential SF	6,241,980,800	95%	0%
Residential MF	0	0%	0%
Industrial	0	0%	0%
Commercial	0	5%	0%
Institutional	0	0%	0%
Agricultural	0	0%	0%

**H. System Data Comment Section**

Provide additional comments about system data below.

## Section III: Wastewater System Data

If you do not provide wastewater system services then you have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the Water Conservation Plan Checklist to complete your Water Conservation Plan.

### A. Wastewater System Data (Attach a description of your wastewater system.)

- Design capacity of wastewater treatment plant(s): 21,000,000 gallons per day.
- List the active wastewater connections by major water use category.

Water Use Category*	Active Wastewater Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal			0	0%
Industrial			0	0%
Commercial		3,253	3,253	100%
Institutional			0	0%
Agricultural			0	0%
<b>TOTAL</b>	0	3,253	3,253	

- What percent of water is serviced by the wastewater system? 99%
- For the previous five years, enter the number of gallons of wastewater that was treated by the utility.

Month	Total Gallons of Treated Wastewater				
	2010	2011	2012	2013	2014
January	326,170,000	33,443,000	349,240,000	273,580,000	297,990,000
February	302,990,000	313,310,000	315,580,000	246,880,000	247,980,000
March	326,300,000	337,620,000	337,380,000	272,140,000	274,490,000
April	339,750,000	301,750,000	337,870,000	280,880,000	270,100,000
May	349,200,000	316,570,000	326,260,000	281,810,000	275,880,000
June	339,620,000	310,130,000	302,110,000	257,350,000	294,140,000
July	354,920,000	324,160,000	342,030,000	2,801,080,000	277,230,000
August	349,640,000	330,270,000	343,830,000	300,660,000	279,960,000
September	352,630,000	310,870,000	341,190,000	288,540,000	275,420,000
October	326,080,000	323,640,000	351,520,000	291,910,000	268,490,000
November	322,250,000	338,430,000	275,300,000	272,240,000	273,210,000
December	334,930,000	349,130,000	262,420,000	286,330,000	260,930,000
<b>TOTAL</b>	4,024,480,000	3,589,323,000	3,884,730,000	5,853,400,000	3,295,820,000

4. Can treated wastewater be substituted for potable water?

Yes  No

**B. Reuse Data**

1. Provide data on the types of recycling and reuse activities implemented during the current reporting period.

Type of Reuse	Total Annual Volume (in gallons)
On-site irrigation	
Plant wash down	
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	3,295,820,000
Discharge to surface water	
Evaporation pond	
Other	
<b>TOTAL</b>	<b>3,295,820,000</b>

**C. Wastewater System Data Comment**

Provide additional comments about wastewater system data below.

The City is a Zero discharge facility that irrigates with effluent.

You have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the Water Conservation Plan Checklist to complete your Water Conservation Plan.

## ATTACHMENT 1

### NOTICE

The following boundary description and attached map are recorded in the Midland County real property records as required by Chapter 13, Section 13.257 (r) and (s) of the Texas Water Code, amended by House Bill 2876 passed by the 79<sup>th</sup> Legislature.

#### **Boundary Description of Midland, Texas Certificate of Convenience and Necessity (CCN) Map**

Beginning at the intersection of U.S. Interstate Highway 20 (US I-20) and Farm to Market Road 1788 (FM 1788) for the southwestern-most corner:

Northwest along the Section line that correlates to FM 1788 at this point approximately 3 1/4 miles;

Northeast at a 90° angle approximately 2 miles;

Southeast along the Section line approximately 1 3/4 miles to Business I-20;

Northeast along Business I-20 approximately 3 miles to Loop 250;

Northwest along the Section line that correlates to Loop 250 at this point approximately 6 miles;

Northeast at a 90° angle for approximately 1 mile;

Southeast at a 90° angle along the Section line for approximately 1 mile;

Northeast at a 90° angle for approximately 2 miles;

Northwest at a 90° angle for approximately 1/2 mile;

Northeast at a 90° angle for approximately 1 mile;

Southeast at a 90° angle for approximately 1/2 mile;

Northeast at a 90° angle for approximately 2 miles;

Southeast at a 90° angle along Fairgrounds Road approximately 5 miles to its intersection with State Highway 158;

Northeast at a 90° angle approximately 1/3 mile to U.S. Interstate Highway 20;

Northeast along U.S. Highway 20 approximately 3 miles to its intersection with Floyd Road;

Southeast along Floyd Road to the south side of U.S. Interstate Highway 20;

Southwest along U.S. Interstate 20 approximately 3 miles to its intersection with State Highway 158;

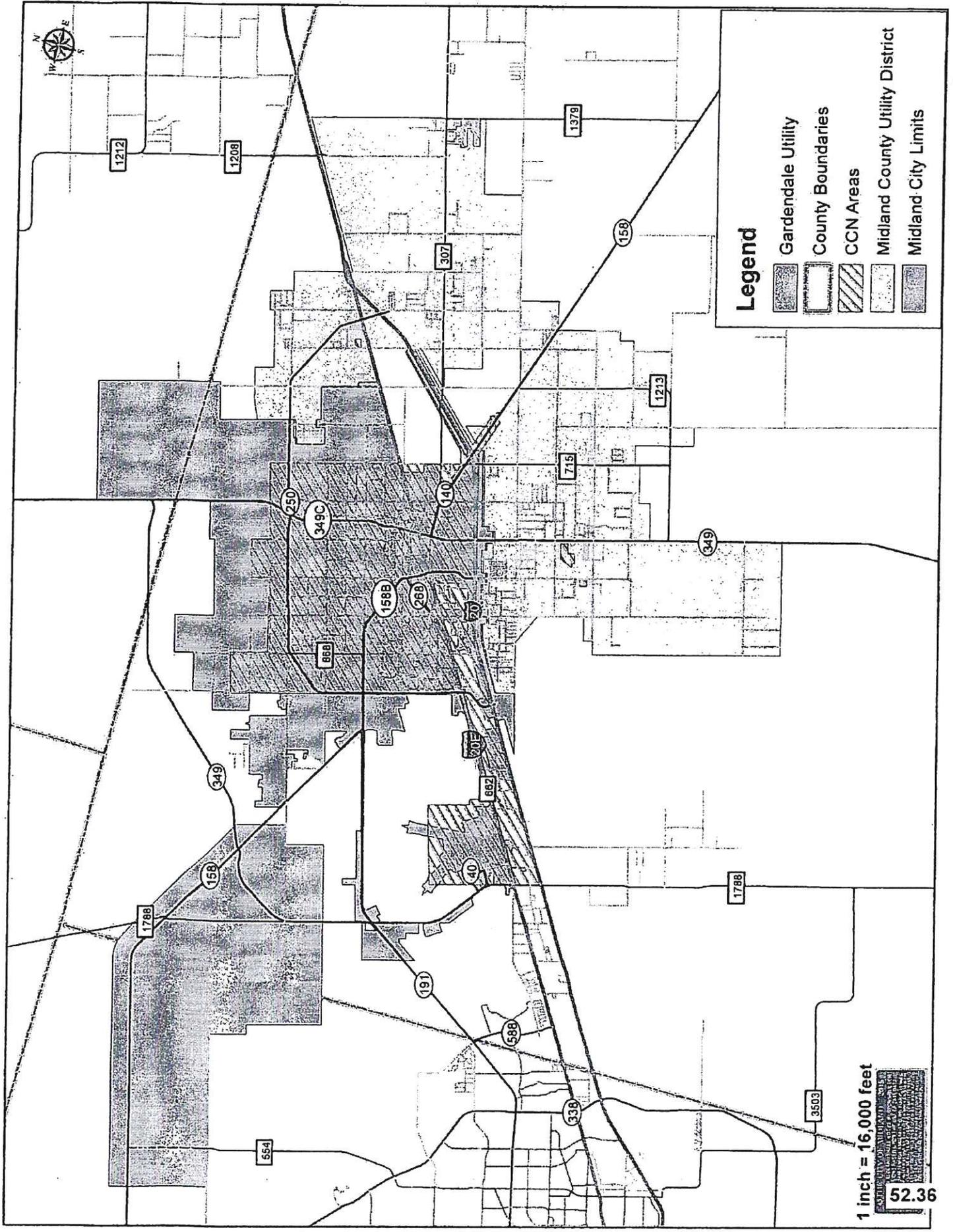
Southeast along State Highway 158 approximately 1 mile;

Southwest to the south side of State Highway 158;

Northwest along State Highway 158 approximately 1 mile to its intersection with U.S. Interstate Highway 20;

Southwest along U.S. Interstate Highway 20 approximately 1 1/2 miles to its intersection with FM 1788, back to the beginning.

The City of Midland Utilities Department submitted this description and the attached map for recordation.



## ATTACHMENT 2

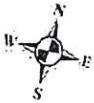
### CITY OF MIDLAND WATER SYSTEM

The City of Midland water system is supplied by both surface and ground water surfaces. Approximately 60% of the current annual demand based on the previous 12 months is provided by The Colorado River Municipal Water District (CRMWD) through two (2) basic contracts. Water is supplied from primarily surface water supplies – lakes J.B. Thomas, J.V. Spence, and O.H. Ivie. Current contract volumes specify 15,001.78 AF from Lake Ivie and 17,797 AF from Lakes Thomas/Spence for the current year. Contractual amounts increase slightly each year through 2029 for the Thomas/Spence source at which time the average daily contractual flow is 17.97 MGD just prior to when the current contract ends. All water is treated at the Midland Water Purification Plant. The treatment plant is designed for 32 MGD.

The balance of water supplies the City owns is supplied by two groundwater systems. The Paul Davis Well Field is directly owned and operated by the City of Midland and can produce a maximum daily flow of approximately 16 MGD from 31 wells pulling from the Ogallala Aquifer. Water from the well field is pumped from approximately 25 miles north of Midland to a point in the Water Treatment Plant between final-filtered water and clear well storage to blend the elevated arsenic, selenium, and fluoride content in the groundwater with the treated surface water. The T-Bar and Clearwater well fields are capable of a maximum daily flow of 20 MGD from a total of 69 wells and are operated by the Midland County Fresh Water Supply District #1 who delivers water to the City of Midland via a contract arrangement. These 2 groundwater sources make up the remaining approximately 40% of the City of Midland's total current use.

Surface water plus the blended Paul Davis well water is pumped into the distribution system by a single high service pump station into each of two (2) separate pressure planes. Groundwater from the T-Bar/Clearwater Ranch sources is delivered to the City in a single line to a delivery point at which further disinfection is applied and the treated water is delivered into the western portion of the City of Midland's distribution system into a third pressure plane. System Ground Storage totals 27 MG which includes Paul Davis ground storage (5), WPP clear well storage (12), and distribution system storage (10). Five (5) Elevated storage tanks provide a total of 8 MG of elevated storage in the distribution system. The distribution network consists of greater than 600 miles of pipeline in 3 separate pressure planes.

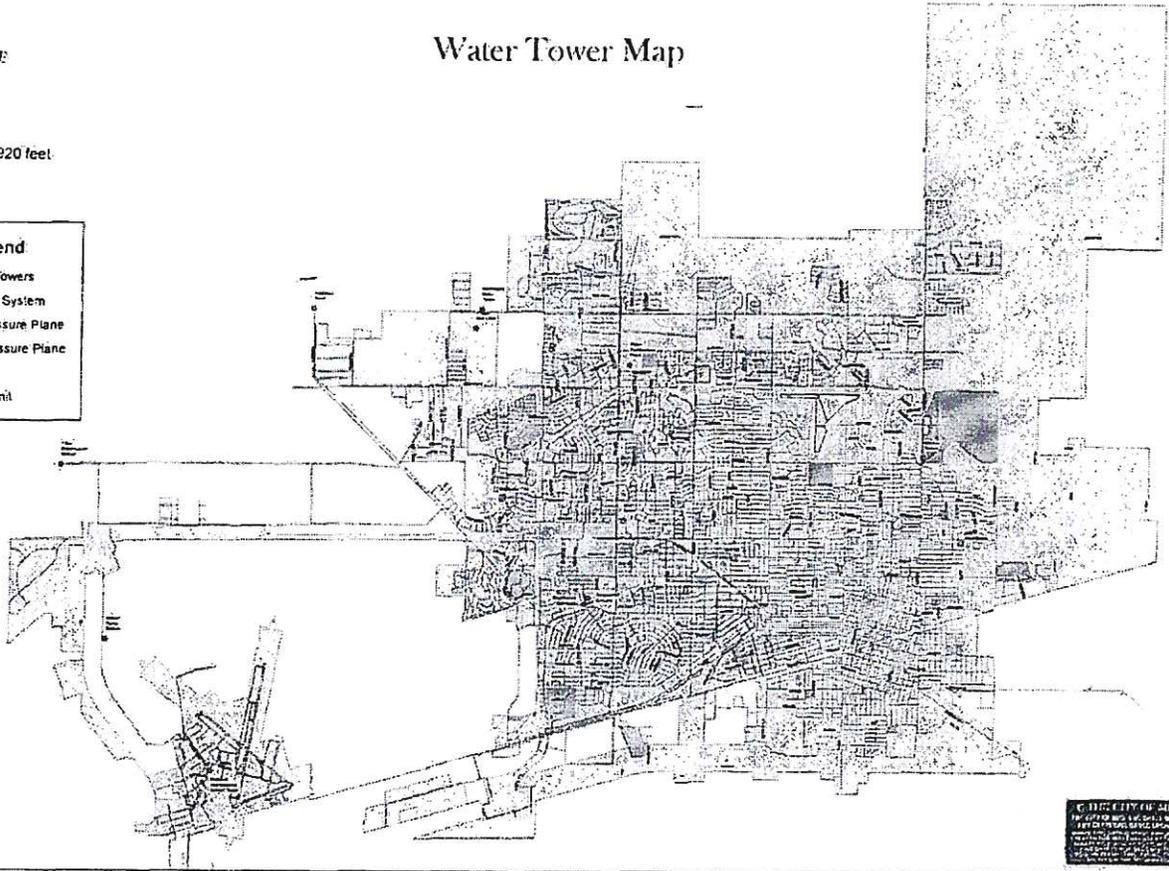
# Water Tower Map



1 inch = 2,920 feet.

**Legend**

- Water Towers
- Airport System
- Hi Pressure Plane
- Lo Pressure Plane
- Parks
- City Limit



**CITY OF MILWAUKEE**  
MILWAUKEE WATER UTILITIES DEPARTMENT  
MILWAUKEE WATER TOWER MAP  
MILWAUKEE, WISCONSIN  
1998

ATTACHMENT 3  
CITY OF MIDLAND  
WASTEWATER SYSTEM

Midland has approximately 629 miles of sanitary sewer collection lines serving the City of some customers in Midland County.

The City of Midland owns and operator the Midland Water Pollution Control Plant No. 1 Wastewater Treatment Facility under permit No. WQ0010223-001. Treatment consists of primary treatment and an activated sludge process with partial flow capacity using the conventional mode. Treatment units include micro screens, grit chambers, primary treatment, aeration basins, final clarifiers and anaerobic sludge digesters. The City is authorized to dispose of treated effluent at a daily average flow not to exceed 21 MGD via surface irrigation of approximately 5000 acres at two sites. Sludge is anaerobically digested and land applied on site #1; screenings are processed and disposed of in the sanitary landfill.

In 2013 the City put the MBR Satellite Reclaimed Water Production Facility (MBR) on line and received authorization NO. R10223-001 to reuse Type 1 reclaimed water for the irrigation of landscape, public parks, school yards, athletic fields, and golf courses. The MBR delivers up to .2 MGD for landscape irrigation at Midland College.

In 2014 the City sent out request for proposals to upgrade existing wastewater plant which is primary treatment only to include additional treatment to make a better quality reuse of 100% effluent at WPCP. No contract has been executed.

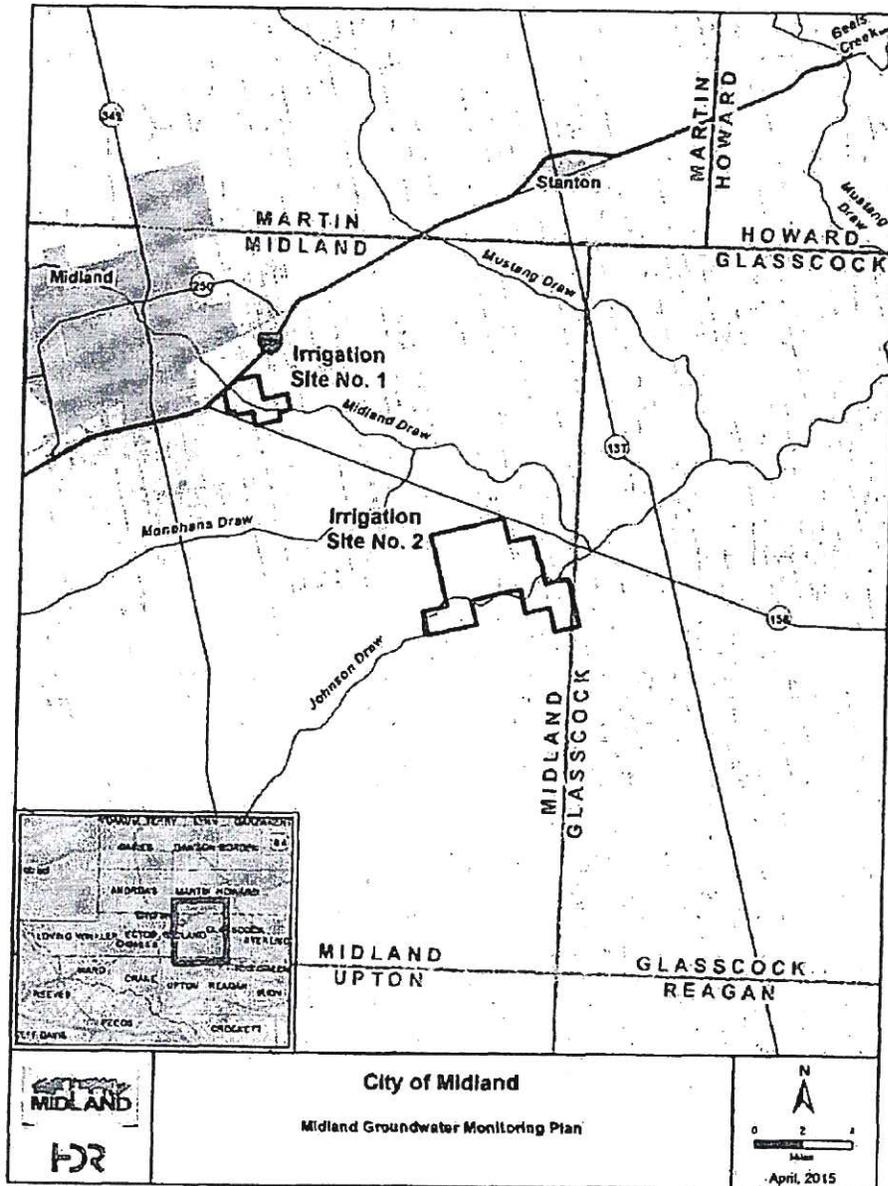


Figure 1: City of Midland, treated domestic wastewater surface irrigation sites

**AWT**  
Engineers and Soil Scientists

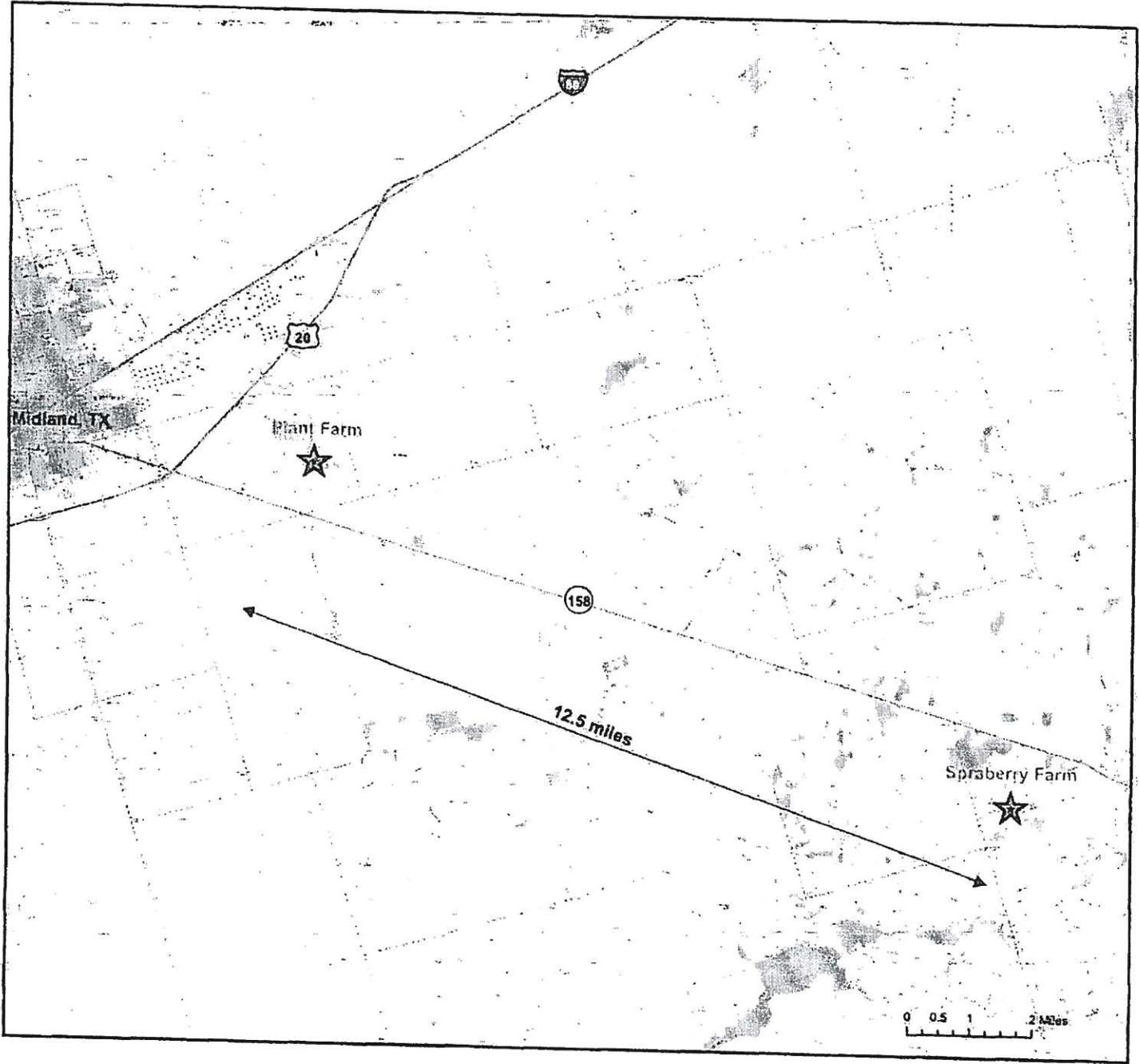
Agri-West Technology, Inc.  
5405 E. A. Burke Ct. Suite 200  
Raleigh, NC 27608  
P: 919.859.6868  
www.agriwest.com

The City of Midland  
Vicinity Map

The City of Midland  
Midland Co., TX



Drawn by Jim Peck  
Reviewed by: [illegible]  
Date: [illegible]



ATTACHMENT 4

Effective October 1, 2014

The City of Midland adopted the new water rate structure as follows:

**Current Residential Rates:**

1. Monthly minimum charge of \$18.38 per unit for Residential and \$14.96 per unit for Apartments. This includes up to 2,000 gallons water use with no additional charge.
2. Between 2,000 gallons and 10,000 gallons the cost is \$5.20 per 1,000 gallons.
3. Between 10,000 gallons and 25,000 gallons the costs is \$6.83 per 1,000 gallons.
4. Between 25,000 gallons and 50,000 gallons the cost is \$9.19 per 1,000 gallons.
5. Between 50,000 gallons the cost is \$45.94 per 1,000 gallons.

**Commercial/Industrial Rates**

Commercial/Industrial rates are the same as the residential rates up to the 50,000 gallons. Beyond 50,000 the cost is \$9.19 per 1,000 gallons.

**Current Sewer Rates:**

All Customers Monthly Base Rate (includes 2,000 gallons per connection/unit)  
\$18.53

All Customers Rate per 1,000 gallons (after initial base rate/2,000 gallons)\*  
\$ 0.75

\*Based on winter average

---

**Appendix D**  
**Sample Water Conservation Report**

## Water Conservation Plan Annual Report Retail Water Supplier

### CONTACT INFORMATION

Name of Entity: \_\_\_\_\_

Public Water Supply Identification Number (PWS ID): \_\_\_\_\_

Certificate of Convenience and Necessity (CCN) Number: \_\_\_\_\_

Surface Water Rights ID Number: \_\_\_\_\_

Wastewater ID Number: \_\_\_\_\_

Check all that apply:

- Retail Water Supplier
- Wholesale Water Supplier
- Wastewater Treatment Utility

Address: \_\_\_\_\_ City: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Email: \_\_\_\_\_ Telephone Number: \_\_\_\_\_

Regional Water Planning Group: \_\_\_\_\_ [Map](#)

Groundwater Conservation District: \_\_\_\_\_ [Map](#)

Form Completed By: \_\_\_\_\_ Title: \_\_\_\_\_

Date: \_\_\_\_\_

Reporting Period (calendar year):

Period Begin (mm/yyyy) \_\_\_\_\_ Period End (mm/yyyy) \_\_\_\_\_

Check all of the following that apply to your entity:

- Receive financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a water right with TCEQ

## SYSTEM DATA

**Retail Customer Categories\***

- Residential Single Family
- Residential Multi-family
- Industrial
- Commercial
- Institutional
- Agricultural

*\*Recommended Customer Categories for classifying your customer water use. For definitions, refer to Guidance and Methodology on Water Conservation and Water Use.*

1. For this reporting period, select the category(s) used to classify customer water use:
- |  |  |
|--|--|
| <input type="checkbox"/> Residential Single Family | <input type="checkbox"/> Commercial    |
| <input type="checkbox"/> Residential Multi-family  | <input type="checkbox"/> Institutional |
| <input type="checkbox"/> Industrial                | <input type="checkbox"/> Agricultural  |

2. For this reporting period, enter the gallons of metered retail water used by each customer category. If the Customer Category does not apply, enter zero or leave blank.

Retail Customer Category	Number of Connections	Gallons Metered
Residential Single Family		
Residential Multi-family		
Industrial		
Commercial		
Institutional		
Agricultural		
<b>Total Retail Water Metered<sup>1</sup></b>	0	0

1. Residential + Industrial + Commercial + Institutional + Agricultural = Total Retail Water Metered

### Water Use Accounting

	Total Gallons During the Reporting Period
<b>Water Produced:</b> Water from permitted sources such as rivers, lakes, streams, and wells. <i>Same as line 14 of the water loss audit.</i>	
<b>Wholesale Water Imported:</b> Purchased wholesale water transferred into the system. <i>Same as line 15 of the water loss audit.</i>	
<b>Wholesale Water Exported:</b> Wholesale water sold or transferred out of the system. <i>Same as line 16 of the water loss audit.</i>	
<b>System Input:</b> Total water supplied to system and available for retail use.	0
	Produced + Imported - Exported = System Input
<b>Total Retail Water Metered</b>	0
<b>Other Authorized Consumption:</b> Water that is authorized for other uses such as the following: This water may be metered or unmetered. <i>Same as the total of lines 19, 20, and 21 of the water loss audit.</i> <ul style="list-style-type: none"> <li>- back flushing                      - line flushing</li> <li>- storage tank cleaning           - municipal golf courses/parks</li> <li>- fire department use</li> <li>- municipal government offices</li> </ul>	
<b>Total Authorized Use:</b> All water that has been authorized for use.	0
	Total Retail Water + Other Authorized Consumption = Total Authorized Use:
<b>Apparent Losses:</b> Water that has been consumed but not properly measured or billed. <i>Same as line 28 of the water loss audit.</i> <i>(Includes losses due to customer meter accuracy, systematic data discrepancy, unauthorized consumption such as theft)</i>	
<b>Real Losses:</b> Physical losses from the distribution system prior to reaching the customer destination. <i>Same as line 29 of the water loss audit.</i> <i>(Includes physical losses from system or mains, reported breaks and leaks, or storage overflow)</i>	
<b>Unidentified Water Losses:</b> Unreported losses not known or quantified.	0
	System Input - Total Authorized Use - Apparent Losses - Real Losses = Unidentified Water Losses
<b>Total Water Loss</b>	0
	Apparent + Real + Unidentified = Total Water Loss

**Targets and Goals**

Provide the specific and quantified five and ten-year targets as listed in your current Water Conservation Plan. Target dates and numbers should match your current Water Conservation Plan.

Achieve Date	Target for Total GPCD	Target for Residential GPCD	Target for Water Loss (expressed in GPCD)	Target for Water Loss Percentage (expressed in percentage)
Five-year target date: _____				
Ten-year target date: _____				

**Gallons per Capita per Day (GPCD) and Water Loss**

Provide current GPCD and water loss totals. To see if you are making progress towards your stated goals, compare these totals to the above targets and goals. Provide the population and residential water use of your service area.

Total System Input in Gallons	Permanent Population <sup>1</sup>	Total GPCD
0 Water Produced + Wholesale Imported - Wholesale Exported		(System Input ÷ Permanent Population) ÷ 365

1. Permanent Population is the total permanent population of the service area, including single family, multi-family, and group quarter populations.

Residential Use in Gallons (Single Family + Multi-family)	Residential Population <sup>2</sup>	Residential GPCD
0		(Residential Use ÷ Residential Population) ÷ 365

2. Residential Population is the total residential population of the service area, including only single family and multi-family populations.

Total Water Loss	Permanent Population	Water Loss	
		GPCD <sup>3</sup>	Percent <sup>4</sup>
0 Apparent + Real + Unidentified = Total Water Loss			0%

3. (Total Water Loss ÷ Permanent Population) ÷ 365 = Water Loss GPCD

4. (Total Water Loss ÷ Total System Input) x 100 = Water Loss Percentage

## Water Conservation Programs and Activities

*As you complete this section, review your utility's water conservation plan to see if you are making progress towards meeting your stated goals.*

1. What year did your entity adopt or revise the most recent Water Conservation Plan? \_\_\_\_\_
2. Does The Plan incorporate Best Management Practices?       Yes       No
3. Using the table below select the types of Best Management Practices or water conservation strategies actively administered during this reporting period and estimate the savings incurred in implementing water conservation activities and programs. Leave fields blank if unknown.

Methods and techniques for determining gallons saved are unique to each utility as they conduct internal effective cost analyses and long-term financial planning. Texas Best Management Practices can be found at TWDB's Water Conservation Best Management Practices [webpage](#). The [Alliance for Water Efficiency Water Conservation Tracking Tool](#) may offer guidance on determining and calculating savings for individual BMPs.

Best Management Practice	Check if Implemented	Estimated Gallons Saved
<b>Conservation Analysis and Planning</b>		
Conservation Coordinator	<input type="checkbox"/>	
Cost Effective Analysis	<input type="checkbox"/>	
Water Survey for Single Family and Multi-family Customers	<input type="checkbox"/>	
<b>Financial</b>		
Wholesale Agency Assistance Programs	<input type="checkbox"/>	
Water Conservation Pricing	<input type="checkbox"/>	
<b>System Operations</b>		
Metering New Connections and Retrofitting Existing Connections	<input type="checkbox"/>	
System Water Audit and Loss Control	<input type="checkbox"/>	
<b>Landscaping</b>		
Landscape Irrigation Conservation and Incentives	<input type="checkbox"/>	
Athletic Fields Conservation	<input type="checkbox"/>	
Golf Course Conservation	<input type="checkbox"/>	
Park Conservation	<input type="checkbox"/>	
<b>Education and Public Awareness</b>		
School Education	<input type="checkbox"/>	
Public Information	<input type="checkbox"/>	
<b>Rebate, Retrofit, and Incentive Programs</b>		
Conservation Programs for ICI Accounts	<input type="checkbox"/>	
Residential Clothes Washer Incentive Program	<input type="checkbox"/>	
Water Wise Landscape Design and Conversion Programs	<input type="checkbox"/>	

Showerhead, Aerator, and Toilet Flapper Retrofit	<input type="checkbox"/>	
Residential Toilet Replacement Programs	<input type="checkbox"/>	
ICI Incentive Programs	<input type="checkbox"/>	
<b>Conservation Technology</b>		
Water Reuse	<input type="checkbox"/>	
New Construction Graywater	<input type="checkbox"/>	
Rainwater Harvesting and Condensate Reuse	<input type="checkbox"/>	
<b>Regulatory and Enforcement</b>		
Prohibition on Wasting Water	<input type="checkbox"/>	
Other, please describe:		
<b>Total Gallons of Water Saved</b>		<b>0</b>

4. For this reporting period, provide the estimated gallons of direct or indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)	
On-site irrigation		
Plant wash down		
Chlorination/de-chlorination		
Industrial		
Landscape irrigation (parks, golf courses)		
Agricultural		
Other, please describe:		
<b>Total Volume of Reuse</b>		<b>0</b>

5. For this reporting period, estimate the savings from water conservation activities and programs.

Gallons Saved/Conserved	Gallons Recycled/Reused	Total Volume of Water Saved <sup>5</sup>	Dollar Value of Water Saved <sup>6</sup>
0		0	

5. Estimated Gallons Saved/Conserved + Estimated Gallons Recycled/Reused = Total Volume Saved

6. Estimate this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital costs due to conservation.

6. During this reporting period, did your rates or rate structure change?  Yes  No

Select the type of rate pricing structures used. Check all that apply.

<input type="checkbox"/> Uniform Rates	<input type="checkbox"/> Water Budget Based Rates	<input type="checkbox"/> Surcharge - seasonal
<input type="checkbox"/> Flat Rates	<input type="checkbox"/> Excess Use Rates	<input type="checkbox"/> Surcharge - drought
<input type="checkbox"/> Inclining/Inverted Block Rates	<input type="checkbox"/> Drought Demand Rates	<input type="checkbox"/> Other, please describe:
<input type="checkbox"/> Declining Block Rates	<input type="checkbox"/> Tailored Rates	
<input type="checkbox"/> Seasonal Rates	<input type="checkbox"/> Surcharge - usage demand	

7. For this reporting period, select the public awareness or educational activities used.

	Implemented	Number/Unit
<i>Example: Brochures Distributed</i>	√	10,000/year
<i>Example: Educational School Programs</i>	√	50 students/month
Brochures Distributed	<input type="checkbox"/>	_____
Messages Provided on Utility Bills	<input type="checkbox"/>	_____
Press Releases	<input type="checkbox"/>	_____
TV Public Service Announcements	<input type="checkbox"/>	_____
Radio Public Service Announcements	<input type="checkbox"/>	_____
Educational School Programs	<input type="checkbox"/>	_____
Displays, Exhibits, and Presentations	<input type="checkbox"/>	_____
Community Events	<input type="checkbox"/>	_____
Social Media campaigns	<input type="checkbox"/>	_____
Facility Tours	<input type="checkbox"/>	_____
Other :	<input type="checkbox"/>	_____

## Leak Detection and Water Loss

1. During this reporting period, how many leaks were repaired in the system or at service connections? \_\_\_\_\_

Select the main cause(s) of water loss in your system.

- Leaks and breaks
- Un-metered utility or city uses
- Master meter problems
- Customer meter problems
- Record and data problems
- Other: \_\_\_\_\_
- Other: \_\_\_\_\_

2. For this reporting period, provide the following information regarding meter repair:

Type of Meter	Total Number	Total Tested	Total Repaired	Total Replaced
Production Meters				
Meters larger than 1 1/2"				
Meters 1 1/2" or smaller				

3. Does your system have automated meter reading?       Yes       No

## Program Effectiveness and Drought

1. In your opinion, how would you rank the effectiveness of your conservation activities?

Customer Classification	Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
Residential Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industrial Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Institutional Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. During the reporting period, did you implement your Drought Contingency Plan?

Yes                       No

If yes, how many days were water use restrictions in effect? \_\_\_\_\_

If yes, check the reason(s) for implementing your Drought Contingency Plan.

- |   |   |
|---|---|
| <input type="checkbox"/> Water Supply Shortage<br><input type="checkbox"/> High Seasonal Demand<br><input type="checkbox"/> Capacity Issues | <input type="checkbox"/> Equipment Failure<br><input type="checkbox"/> Impaired Infrastructure<br><input type="checkbox"/> Other: |
|---|---|

3. Select the areas for which you would like to receive more technical assistance:

- |   |   |
|---|---|
| <input type="checkbox"/> Best Management Practices<br><input type="checkbox"/> Drought Contingency Plans<br><input type="checkbox"/> Landscape Irrigation<br><input type="checkbox"/> Leak Detection and Equipment<br><input type="checkbox"/> Rainwater Harvesting<br><input type="checkbox"/> Rate Structures | <input type="checkbox"/> Educational Resources<br><input type="checkbox"/> Water Conservation Annual Reports<br><input type="checkbox"/> Water Conservation Plans<br><input type="checkbox"/> Water IQ: Know Your Water<br><input type="checkbox"/> Water Loss Audits<br><input type="checkbox"/> Recycling and Reuse |
|---|---|

**SUBMIT**