

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
INTEROFFICE MEMORANDUM**

Date: March 31, 2022

To: Office of the Chief Clerk
Attn. Melissa Schmidt

From: Ruth Takeda
Staff Attorney, Environmental Law Division

Subject: Transmittal of documents to SOAH for Administrative Record

**Applicant – San Antonio Water System
Permit application – 13098
Program area – Water Rights Permitting and Availability Section
SOAH Docket No. 582-22-1990
TCEQ Docket No. 2021-1391-WR**

In a permit hearing, the record in a contested case includes copies of the public notices relating to the permit application, as well as affidavits of public notices that are filed by the applicant directly with the TCEQ's Office of the Chief Clerk (OCC). In addition, the record includes the following documents that are provided to the OCC by the staff of the TCEQ Executive Director (ED). 30 Tex. Admin. Code § 80.118. Documents included with this transmittal are indicated below:

- The ED's final draft permit, including any special provisions or conditions.
- The ED's technical memorandum/ memoranda regarding the application.
- The compliance summary of the applicant.
- Copies of the public notices relating to the permit application, as well as affidavits regarding public notices.
- The ED's Response to Public Comment (an agency document determined by the ED to be necessary to reflect the administrative and technical review of the application).

The application is not included with this transmittal because it is the applicant's document and the applicant is the party who should offer it into evidence. **This is not a permit governed by HB 810 or SB 709.**

This transmittal serves to also request that the OCC transmit the attached items, together with (a) the public notice documents (including the notice of hearing) and (b) where available for direct referrals only, the ED's Response to Comments to the State Office of Administrative Hearings.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



WATER USE PERMIT

PERMIT NO. 13098

TYPE: § 11.042

Permittee:	San Antonio Water System	Address:	2800 U.S. Highway 281 San Antonio, Texas 78212
Filed:	May 9, 2016	Granted:	
Purpose:	Municipal, Agricultural, Industrial, Mining & Instream	Counties:	Bexar, Calhoun, Goliad, Karnes, Refugio, Victoria, & Wilson
Watercourse:	Medina River, Salado Creek, Comanche Creek, Leon Creek, Medio Creek, tributaries of the San Antonio, the San Antonio River & the Guadalupe River	Watersheds:	San Antonio & Guadalupe River Basins

WHEREAS, San Antonio Water System (SAWS) seeks authorization to use the bed and banks of the Medina River, Salado Creek, Comanche Creek, Leon Creek, Medio Creek, and the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin, to convey 260,991 acre-feet of groundwater-based return flows per year for subsequent diversion from a reach on the Guadalupe River, for municipal, agricultural, industrial, mining, and instream purposes of use in Bexar, Calhoun, Goliad, Karnes, Refugio, Victoria, Wilson counties; and

WHEREAS, SAWS owns and operates four wastewater treatment plants:

- A. Steven M. Clouse Water Recycling Center (WRC), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010137033 with a total discharge of 140,017 acre-feet per year; and
- B. Leon Creek WRC, authorized under TPDES Permit No. WQ0010137003 with a total discharge of 51,526 acre-feet per year; and
- C. Medio Creek WRC, authorized under TPDES Permit No. WQ0010137040 with a total discharge of 17,922 acre-feet per year; and
- D. Salado Creek WRC, authorized under TPDES Permit No. WQ0010137008 with a total discharge of 51,526 acre-feet per year; and

WHEREAS, the return flows are discharged at the following points, located in Bexar County within the San Antonio River Basin; and

WHEREAS, Discharge Point No. 1 (Steven M. Clouse WRC Outfall 001) is located at Latitude 29.235827° N, Longitude 98.416244° W on the Medina River; and

WHEREAS, Discharge Point No. 2 (Steven M. Clouse WRC Outfall 002) is located at Latitude 29.461615° N, Longitude 98.468752° W on the San Antonio River; and

WHEREAS, Discharge Point No. 3 (Steven M. Clouse WRC Outfall 003) is located at Latitude 29.446454° N, Longitude 98.480740° W on the San Antonio River; and

WHEREAS, Discharge Point No. 4 (Steven M. Clouse WRC Outfall 004) is located at Latitude 29.484730° N, Longitude 98.416819° W on Salado Creek; and

WHEREAS, Discharge Point No. 5 (Steven M. Clouse WRC Outfall 005) is located at Latitude 29.420978° N, Longitude 98.485352° W on the San Antonio River; and

WHEREAS, Discharge Point No. 6 (Steven M. Clouse WRC Outfall 006) is located at Latitude 29.275560° N, Longitude 98.428978° W on the San Antonio River; and

WHEREAS, Discharge Point No. 7 (Leon Creek WRC Outfall 001) is located at Latitude 29.275319° N, Longitude 98.513008° W on Comanche Creek; and

WHEREAS, Discharge Point No. 8 (Medio Creek WRC Outfall 001) is located at Latitude 29.398847° N, Longitude 98.668031° W on Medio Creek; and

WHEREAS, Discharge Point No. 9 (Salado Creek WRC Outfall 001) is located at Latitude 29.275560° N, Longitude 98.428978° W on the San Antonio River; and

WHEREAS, SAWS seeks to divert the discharged groundwater-based return flows from a reach on the Guadalupe River, Guadalupe River Basin, at a maximum combined diversion rate of 161,878 gpm (360.53 cfs), with the proposed upstream point of the reach being at Latitude 28.478432° N, Longitude 96.862858° W and the downstream point being at Latitude 28.447519° N and Longitude 96.785611° W in Calhoun County; and

WHEREAS, portions of the 260,991 acre-feet of groundwater-based return flows per year requested in the application were previously authorized under Certificate of Adjudication Nos. 19-4768 and 19-2162 and Water Use Permit No. 5705; and

WHEREAS, SAWS requests to account for and use those groundwater-based return flows under Water Use Permit No. 13098 when those portions of the previously authorized return flows are not being diverted under those authorizations; and

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

WHEREAS, this permit, if granted, is subject to requirements and orders of the South Texas Watermaster; and

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

WHEREAS, SAWS has provided and the Executive Director has approved the *San Antonio Water System Groundwater Based Effluent Water Balance Accounting Plan Water Use Permit Application No. 13098*; 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 Water Use Permit No. 13098, is issued to San Antonio Water System, Permittee, subject to the following terms and conditions:

1. USE

Permittee is authorized use of the bed and banks of the Medina River, Salado Creek, Comanche Creek, Leon Creek, Medio Creek, and the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin, to convey 260,991 acre-feet of groundwater-based return flows per year, for subsequent diversion and use for municipal, agricultural, industrial, mining, and instream purposes in Bexar, Calhoun, Goliad, Karnes, Refugio, Victoria, Wilson counties.

2. DISCHARGE

The TPDES permits authorize Permittee to discharge groundwater-based return flows at the following locations in Bexar County, within the San Antonio River Basin:

- A. Discharge Point No. 1 (Steven M. Clouse WRC Outfall 001) is located at Latitude 29.235827° N, Longitude 98.416244° W on the Medina River; and
- B. Discharge Point No. 2 (Steven M. Clouse WRC Outfall 002) is located at Latitude 29.461615° N, Longitude 98.468752° W on the San Antonio River; and
- C. Discharge Point No. 3 (Steven M. Clouse WRC Outfall 003) is located at Latitude 29.446454° N, Longitude 98.480740° W on the San Antonio River; and
- D. Discharge Point No. 4 (Steven M. Clouse WRC Outfall 004) is located at Latitude 29.484730° N, Longitude 98.416819° W on Salado Creek; and
- E. Discharge Point No. 5 (Steven M. Clouse WRC Outfall 005) is located at Latitude 29.420978° N, Longitude 98.485352° W on the San Antonio River; and

- F. Discharge Point No. 6 (Steven M. Clouse WRC Outfall 006) is located at Latitude 29.275560° N, Longitude 98.428978° W on the San Antonio River; and
- G. Discharge Point No. 7 (Leon Creek WRC Outfall 001) is located at Latitude 29.275319° N, Longitude 98.513008° W on Comanche Creek; and
- H. Discharge Point No. 8 (Medio Creek WRC Outfall 001) is located at Latitude 29.398847° N, Longitude 98.668031° W on Medio Creek; and
- I. Discharge Point No. 9 (Salado Creek WRC Outfall 001) is located at Latitude 29.275560° N, Longitude 98.428978° W on the San Antonio River.

3. DIVERSION

- A. Permittee is authorized to divert its groundwater-based return flows from a reach on the Guadalupe River, Guadalupe River Basin, with the upstream point being at Latitude 28.478432° N, Longitude 96.862858° W and the downstream point being at Latitude 28.447519° N and Longitude 96.785611° W in Calhoun County.
- B. The maximum combined diversion rate is 161,878 gpm (360.53 cfs).

4. TIME PRIORITY

The 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 senior water rights.

5. 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 the diversion structure.
- B. The diversions 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 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 TCEQ may begin proceedings to cancel this permit. Permittee shall only divert its return flows that are actually discharged and if there is a permanent reduction in available return flows, Permittee shall immediately seek an amendment to the permit to reflect the reductions.

- C. 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 (*San Antonio Water System Groundwater Based Effluent Water Balance Accounting Plan Water Use Permit Application No. 13098*). Permittee shall maintain the plan in electronic format and make the data available to the Executive Director upon request. Any modifications to *San Antonio Water System Groundwater Based Effluent Water Balance Accounting Plan Water Use Permit Application No. 13098* 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 pursuant to Paragraph 3. DIVERSION, 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.
- D. Permittee shall only divert the actual daily amount of groundwater-based return flows discharged from the four treatment plants less the estimated losses after accounting for travel times between the discharge and diversion points, and less any groundwater-based return flows diverted under Permittee's other authorizations, when those authorizations are being used, as determined in the accounting plan required by Paragraph 5.C.
- E. Prior to reuse of groundwater-based return flows in excess of the amount currently authorized by TPDES Permit Nos. WQ0010137033, WQ0010137003, WQ0010137040, and WQ0010137008, as described in Paragraph 2. DISCHARGE, Permittee shall apply for and be granted the right to reuse those return flows. Permittee shall amend the accounting plan to include future discharges of groundwater-based return flows prior to diverting said return flows.
- F. A change in the location of the diversion point or addition of diversion points shall require an amendment to the permit and additional special conditions could be required.
- 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 South Texas Watermaster reasonable access to the property to inspect the measuring device and records.
- I. Permittee shall contact the South Texas Watermaster prior to diversion of water authorized by this permit.

This permit is issued subject to all superior water rights in the San Antonio River Basin and Guadalupe 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: Sarah Henderson, Project Manager Date: March 24, 2021
Water Rights Permitting Team

Through: Jason Godeaux, Team Leader
Resource Protection Team

From:  Kenneth Coonrod, Aquatic Scientist
Resource Protection Team

KC

Subject: San Antonio Water System
WRPERM 13098
CN600529069
The Medina River, Medio Creek, Leon Creek, Salado Creek, the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin
Bexar, Wilson, Karnes, Goliad, Victoria, Refugio and Calhoun counties

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

San Antonio Water System (SAWS) requests authorization to use the bed and banks of the Medina River, Salado Creek, Comanche Creek, Lower Leon Creek, Medio Creek, and the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin, to convey 260,991 acre-feet per year of groundwater-based return flows, for subsequent diversion from a reach on the Guadalupe River, for municipal, agricultural, industrial, mining, and instream purposes of use in Bexar, Wilson, Karnes, Goliad, Victoria, Refugio, and Calhoun counties.

SAWS owns and operates four wastewater treatment plants, Dos Rios Water Recycling Center (WRC), authorized under Texas Pollution Discharge Elimination System (TPDES) Permit No. WQ0010137033 with a total discharge of 140,017 acre-feet per year; Leon Creek WRC, authorized under TPDES Permit No. WQ0010137003 with a total discharge of 51,526 acre-feet per year; Medio Creek WRC, authorized under TPDES Permit No. WQ0010137040 with a total discharge of

17,922 acre-feet per year; and Salado Creek WRC, authorized under TPDES Permit No. WQ0010137008 with a total discharge of 51,526 acre-feet per year.

Portions of the 260,991 acre-feet of return flows per year requested in the application were previously authorized under Certificate of Adjudication Nos. 19-4768 and 19-2162 and Water Use Permit No. 5705. When those portions of the previously authorized return flows are not being diverted under those authorizations, SAWS requests to account for and use those return flows under Water Use Permit No. 13098.

ENVIRONMENTAL ANALYSIS

Aquatic and Riparian Habitats: SAWS' proposed project location includes portions of the Medina River, Medio Creek, Leon Creek, Salado Creek, the San Antonio River, and the Guadalupe River, all perennial water bodies, which traverse the Southern Post Oak Savannah ecoregion, the Northern Humid Gulf Coastal Prairies ecoregion, the Southern Subhumid Gulf Coastal Prairies ecoregion, the Floodplains and Low Terraces ecoregion, and the Mid-coast Barrier Islands and Coastal Marshes ecoregion (Griffith et al. 2007).

The checklist for the Guadalupe and San Antonio River Basins identified 78 species of fish occurring within the Lower Guadalupe (United States Geological Survey [USGS] code 12100204), Upper San Antonio (USGS code 12100301), and Lower San Antonio (USGS code 12100303) hydrologic units (Hendrickson and Cohen 2015). The Guadalupe bass (*Micropterus treculii*), the Guadalupe darter (*Percina apristis*), Cagle's map turtle (*Graptemys caglei*), and the false spike (*Fusconaia mitchelli*), high-interest aquatic species; and a caddisfly (*Nectopsyche texana*), two mayflies (*Tortopus circumfluus*) and (*Tricorythodes curvatus*), the black-spotted newt (*Notophthalmus meridionalis*), the interior least tern (*Sternula antillarum athalassos*), the reddish egret (*Egretta rufescens*), the black rail (*Laterallus jamaicensis*), the Rufa red knot (*Calidris canutus rufa*), the tropical parula (*Setophaga pitiayumi*), the Texas diamondback terrapin (*Malaclemys terrapin littoralis*), and the white-nosed coati (*Nasua narica*), high-interest, aquatic-dependent species, are known to occur in Bexar, Wilson, Karnes, Goliad, Victoria, Refugio, and Calhoun counties (TPWD 2015). SAWS' request for the use of bed and banks to convey groundwater-based return flows is not expected to have an effect on any high-interest aquatic or aquatic-dependent species, because no additional state water is being requested.

The TCEQ regulates bed and banks authorizations to convey groundwater- and surface water-based return flows 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 Guadalupe, San Antonio, Mission, and Aransas Rivers, and Mission, Copano, Aransas, and San Antonio Bays (Title 30 Texas Administrative Code (TAC) Chapter 298 Subchapter

E). These environmental flow standards are considered adequate to support a sound ecological environment (Title 30 TAC § 298.360). This review is conducted in accordance with §§ 11.042 and 11.147(e-3) of the TWC and Title 30 TAC Chapter 298 Subchapter E (Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays). In Title 30 TAC § 298.360, environmental flow standards were established at USGS Gage No. 08188570 – San Antonio River near McFaddin, TX. SAWS' proposed diversion reach is located in the tidally-influenced portion of the Guadalupe River downstream of the most-downstream measurement point in the adopted rules. SAWS is proposing to discharge groundwater-based return flows into tributaries of the San Antonio River and the San Antonio River at points over 150 miles upstream of the requested diversion reach in Calhoun County. Introduction of additional water into the riverine ecosystem should not have an effect on environmental quality; however, the ecosystem will likely adjust to the increased flow over time. In the future, should SAWS propose to amend this permit to add a diversion point(s) upstream of the tidally-influenced portion of the Guadalupe River, environmental flow restrictions will be necessary to protect aquatic resources downstream of that diversion point(s).

Recreational Uses: Guadalupe River Tidal (Segment 1801), Guadalupe River Below San Antonio River (Segment 1802), Lower San Antonio River (Segment 1901), Medina River Below Medina Diversion Lake (Segment 1903), Lower Leon Creek (Segment 1906), Salado Creek (Segment 1910), Upper San Antonio River (Segment 1911), and Medio Creek (Segment 1912) have designated primary contact recreation 1 uses, and Upper Medio Creek (Assessment Unit 1912A) has a presumed primary contact recreation 1 use (TCEQ 2018). SAWS' request should not adversely impact recreational uses.

Water Quality: Guadalupe River Tidal (Segment 1801) has a designated exceptional aquatic life use and Guadalupe River Below San Antonio River (Segment 1802) and Lower Leon Creek (Segment 1906) have a designated high aquatic life and public water supply use (TCEQ 2018). Lower San Antonio River (Segment 1901) and Upper San Antonio River (Segment 1911) have a designated high aquatic life use, and Upper Medio Creek (Assessment Unit 1912A) has a presumed high aquatic life use (TCEQ 2018). Medina River Below Medina Diversion Lake (Segment 1903) has a designated high aquatic life and aquifer protection use, Salado Creek (Segment 1910) has a designated high aquatic life, public water supply, and aquifer protection use, and Medio Creek (Segment 1912) has a designated intermediate aquatic life use (TCEQ 2018).

Segments 1801, 1802, 1901, and 1911, and Assessment Units (AU) 1903_01, 1903_02, 1903_03, 1912_01, and 1912A_01 are identified in the *Texas Integrated Report* with a concern for screening levels for nitrate in water; Segment 1901 and AUs 1903_01, 1903_02, 1911_01, 1911_02, 1911_03, 1911_04, 1911_05, 1911_09, 1912_01, and 1912A_01 are also identified with a concern for screening levels for total phosphorus in water; and AUs 1901_01, 1901_06, and 1911_06 are

listed with a concern for screening levels for chlorophyll-*a* in water (TCEQ 2020). AUs 1903_01, 1903_02, 1903_03, and 1912_01 are listed as non-supporting for bacteria in water, and Segment 1801 and AUs 1901_01, and 1911_06 are listed with a use concern for bacteria in water (TCEQ 2020). AUs 1901_02, 1910_02, 1911_08, and 1911_09 are listed as non-supporting for impaired fish community in water; AU 1901_05 is listed with a use concern for impaired fish community in water; AUs 1901_02, 1911_05, and 1911_07 are listed with a concern for screening levels for impaired habitat in water; and AUs 1910_02 and 1911_08 are listed as non-supporting for impaired macrobenthic community in water (TCEQ 2020). AUs 1910_02, 1910_03, and 1910_04 have a concern for screening levels for depressed dissolved oxygen in water (TCEQ 2020). SAWS' 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 application does not request a new appropriation of water; therefore, SAWS' request should not have any impact to the Guadalupe 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 the diversion structure.

LITERATURE CITED

Griffith GE, Bryce SA, Omernik JM, Rogers AC. 2007. Ecoregions of Texas - Project Report to Texas Commission on Environmental Quality. Reston (VA): U.S. Geological Survey. Report No.: AS-199. 125p.

Hendrickson DA, Cohen AE. 2015. Fishes of Texas Project Database [Internet]. [cited 2021 Feb 23]; Version 2.0. Available from <http://doi.org/10.17603/C3WC70>
TCEQ. 2020. Texas Integrated Report of Surface Water Quality §§307.1-307.10. Austin (TX): Texas Commission on Environmental Quality.

TCEQ. 2018. Texas Surface Water Quality Standards §§307.1-307.10. Austin (TX): Texas Commission on Environmental Quality.

TCEQ. 2020. Texas Integrated Report of Surface Water Quality. Austin (TX): Texas Commission on Environmental Quality.

San Antonio Water System, 13098

The Medina River, Medio Creek, Leon Creek, Salado Creek, and the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin

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TPWD. 2015. Rare, Threatened, and Endangered Species of Texas by County [Internet]. Austin (TX): Calhoun County, revised March 5, 2021. [cited 2021 Feb, 23]. Available from <http://tpwd.texas.gov/gis/rtest/>.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager
Water Rights Permitting Team

Date: March 24, 2021

Through: Jason Godeaux, Team Leader
Resource Protection Team



Kristin Wang, Senior Water Conservation Specialist
Resource Protection Team

From: Jennifer Allis, Senior Water Conservation Specialist
Resource Protection Team



Subject: San Antonio Water System
WRPERM 13098
CN600529069
The Medina River, Medio Creek, Leon Creek, Salado Creek, the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin
Bexar, Wilson, Karnes, Goliad, Victoria, Refugio and Calhoun counties

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Portions of the 260,991 acre-feet of return flows per year requested in the application were previously authorized under Certificate of Adjudication Nos. 19-4768 and 19-2162 and Water Use Permit No. 5705. When those portions of the previously authorized return flows are not being diverted under those authorizations, SAWS requests to account for and use those return flows under Water Use Permit No. 13098.

WATER CONSERVATION REVIEW

Pursuant to Title 30 Texas Administrative Code § 295.9, a water conservation plan is not required to be submitted for this application for only groundwater-based return flows.

The application is consistent with the 2021 Region L Water Plan and the 2017 State Water Plan because there is nothing in the water plans that conflicts with issuing this permit.

RECOMMENDATIONS

Resource Protection Staff have no recommendations regarding the proposed permit, if granted.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Sarah Henderson, Project Manager
Water Rights Permitting Team

Date: March 24, 2021

From: Kathy Alexander, Ph.D.
Technical Specialist
Water Availability Division

Subject: San Antonio Water System
WRPERM 13098
CN600529069
Multiple tributaries of the San Antonio River, San Antonio River and Guadalupe River
San Antonio and Guadalupe River Basins
Bexar, Wilson, Karnes, Goliad, Victoria, Refugio, and Calhoun Counties

HYDROLOGY REVIEW

Application Summary

San Antonio Water System (SAWS) requests authorization to use the bed and banks of the Medina River, Salado Creek, Comanche Creek, Leon Creek, Medio Creek, and the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin, to convey 260,991 acre-feet per year of groundwater-based return flows, for subsequent diversion from a reach on the Guadalupe River, for municipal, agricultural, industrial, mining, and instream purposes of use in Bexar, Wilson, Karnes, Goliad, Victoria, Refugio, and Calhoun counties.

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Portions of the 260,991 acre-feet of return flows per year requested in the application were previously authorized under Certificate of Adjudication Nos. 19-4768 and 19-2162 and Water Use Permit No. 5705. When those portions of the previously authorized return flows are not being diverted under those authorizations, SAWS requests to account for and use those return flows under Water Use Permit No. 13098.

SAWS submitted an accounting plan (*San Antonio Water System Groundwater Based Effluent Water Balance Accounting Plan Water Use Permit Application No. 13098*) on March 17, 2021 and minor non-substantive revisions to the text file on March 24, 2021.

The application was declared administratively complete on May 9, 2016.

Water Availability Review and No Injury Analysis

Resource Protection staff did not recommend instream flow requirements for the application although they did recommend that a special condition be included in the permit. See Resource Protection staff's March 24, 2021 memorandum.

Regarding the request to use the bed and banks of the Medina River, Salado Creek, Comanche Creek, Leon Creek, Medio Creek, and the San Antonio River, San Antonio River Basin and the Guadalupe River, Guadalupe River Basin to convey groundwater-based return flows, the application included the information required in 30 TAC 295.112.

Staff reviewed SAWS request to reuse its groundwater-based return flows by evaluating whether diversion and use of these return flows would affect water rights that were granted based on the use and availability of those return flows.

First, staff reviewed water rights in the San Antonio and Guadalupe River Basins to determine whether any existing water rights were explicitly granted based on SAWS return flows and determined that, based on available commission records, there were water rights that were explicitly granted based on these return flows. These water rights are either owned by SAWS or are based on contracts with SAWS.

Next, in order to evaluate whether SAWS reuse of its groundwater based return flows would affect other water rights that may have been granted based on the use or availability of the return flows, staff used the Full Authorization Simulation of the San Antonio and Guadalupe WAM in which all water rights use their authorized amounts and return flows are not included. The period of record for the San Antonio and Guadalupe WAM is 1934 through 1989.

Staff modified the San Antonio and Guadalupe WAM to include the historically discharged groundwater-based return flows from SAWS' wastewater treatment plants (WWTP). SAWS submitted five years of historical discharge data for 2008 through 2012. Staff also obtained WWTP discharge information for the period from January 2016 through December 2020. Staff calculated the minimum monthly discharge for each month from both datasets. Discharges from the WWTPs vary seasonally and between individual years and between the two five-year time periods. For example, for some of the WWTPs, there were individual months with a zero value. Staff compared the earlier data to the more recent data and used the greater of the monthly values from the two datasets, and further adjusted the monthly values to remove inconsistent or zero values. Staff's opinion is that using the higher values would be a better indicator of whether the application has the potential to affect existing water rights.

Staff added SAWS' return flows to the WAM and calculated the volume reliabilities of all water rights in the San Antonio River Basin and all water rights below the confluence of the San Antonio River and the Guadalupe River. Volume reliability is defined as the percentage of the total target demand for each water right that is actually supplied. Next, staff performed a simulation using this modified version of the WAM dataset and included diversion of SAWS' groundwater-based return flows, assuming that those diversions had the most senior priority date in the basin. Staff then compared results for the two simulations.

Staff reviewed the change in volume reliabilities and found that although 158 water rights were negatively impacted by the application, the average impact was less than 1% if all discharged return flows were diverted. Staff notes that, as described in the application summary above, some of the return flows would continue to be diverted under SAWS other authorizations and would not be available for use by downstream water rights, including Application 13098, if a permit is granted for the application.

Under Texas Water Code (TWC) §11.042(b) a permit authorizing conveyance of groundwater-based return flows may be subject to special conditions to protect the environment and other water rights. If SAWS adds upstream diversion points in the future, any permit granted would need to be amended to add those upstream diversion points. As noted by Resource Protection staff, if SAWS adds upstream diversion points in the future, an environmental review would need to be conducted to determine whether additional special conditions would be needed to protect the environment. Effects on other water rights would also need to be evaluated at the time of that amendment application.

SAWS submitted an accounting plan that tracks the volume of discharged return flows, losses, the volume of discharged return flows diverted under SAWS' other water rights and contracts, and the volume of return flows available at the diversion reach. Staff reviewed the accounting plan and found it adequate. Staff's opinion is that any possible impacts on existing water rights, should those impacts be determined to exist, would be mitigated by the accounting plan.

Finally, the application is subject to the requirements and orders of the South Texas Watermaster. The Watermaster actively manages water rights on a daily basis in accordance with the prior appropriation doctrine and protects senior water rights in times of shortage. Therefore, existing water rights should not be affected by the application.

Conclusion

TWC 11.042(b) specifically allows for the use of a state watercourse for the conveyance of groundwater-based return flows. SAWS' groundwater-based return flows would not be considered to be part of the natural flow of tributaries of the San Antonio River, the San Antonio River, and the Guadalupe River. Pursuant to TWC 11.042(b), the only limitations on the amount of groundwater-based return flows SAWS could reuse are for losses, environmental interests and protection of any water rights that were granted based on the use or availability of those return flows. Therefore, staff can support granting SAWS request to reuse its groundwater-based return flows.

Regarding reuse of return flows that may be discharged in the future as a result of authorized increases in discharges from the WWTPs, SAWS can apply to reuse those return flows when the increased discharges are authorized under a TPDES permit.

Staff recommends that the following special conditions be included in the permit:

1. The diversions 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 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 TCEQ may begin proceedings to cancel this permit. Permittee shall only divert its return flows that are actually discharged and if there is a permanent reduction in available return flows, Permittee shall immediately seek an amendment to the permit to reflect the reductions.
2. 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 (*San Antonio Water System Groundwater Based Effluent Water Balance Accounting Plan Water Use Permit Application No. 13098*). Permittee shall maintain the plan in electronic format and make the data available to the Executive Director upon request. Any modifications to *San Antonio Water System Groundwater Based Effluent Water Balance Accounting Plan Water Use Permit Application No. 13098* 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 pursuant to Paragraph 3. DIVERSION, 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.
3. Permittee shall only divert the actual daily amount of groundwater-based return flows discharged from the four treatment plants less the estimated losses after accounting for travel times between the discharge and diversion points, and less any groundwater-based return flows diverted under permittee's other authorizations when those authorizations are being used as determined in the accounting plan required by Special Condition 2.
4. Prior to reuse of groundwater-based return flows in excess of the amount currently authorized by TPDES Permit Nos. WQ0010137033, WQ0010137003,

WQ0010137040, and WQ0010137008, as described in Paragraph 2. DISCHARGE, Permittee shall apply for and be granted the right to reuse those return flows. Permittee shall amend the accounting plan to include future discharges of groundwater-based return flows prior to diverting said return flows.

5. A change in the location of the diversion point or addition of diversion points shall require an amendment to the permit and additional special conditions could be required.