April 2025 Update to the Texas Water Quality Management Plan

Prepared by
Water Quality Division, Office of Water

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY • PO BOX 13087 • AUSTIN, TX 78711-3087

Prepared by the
Office of Water
Water Quality Division

Draft WQMP updates for public comment are available on the TCEQ webpage:
www.tceq.texas.gov/permitting/wqmp/WQmanagement_comment.html

Developed in accordance with Sections 205(j), 208,
and 303 of the Clean Water Act
and applicable regulations thereto.

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Introduction

The Texas Water Quality Management Plan (WQMP) is the product of a wastewater treatment facility (WWTF) planning process developed and updated in accordance with provisions of Sections 205(j), 208, and 303 of the Clean Water Act (CWA), as amended. The WQMP is an important part of the State's program for accomplishing its clean water goals.[1]

The Texas Department of Water Resources, a predecessor agency of the Texas Commission on Environmental Quality (TCEQ), prepared the initial WQMP for waste treatment management during the late 1970s. The CWA mandates that the WQMP be updated as needed to fill information gaps and revise earlier certified and approved plans. Any updates to the plan need involve only the elements of the plan that require modification. The original plan and its subsequent updates are collectively referred to as the "State of Texas Water Quality Management Plan."

The WQMP is tied to the State's water quality assessments that identify priority water quality problems. WQMPs are used to direct planning for implementation measures that control and/or prevent water quality problems. Several elements may be contained in the WQMP, such as effluent limitations of wastewater facilities, total maximum daily loads (TMDLs), nonpoint source management controls, identification of designated management agencies, and groundwater and source-water protection planning. Some of these elements may be contained in separate documents, which are prepared independently of the current WQMP update process, but may be referenced as needed to address planning for water quality control measures.

This document, as with previous updates[2], will become part of the WQMP after completion of the public comment period, certification by TCEQ, and approval by the United States Environmental Protection Agency (EPA).

The materials presented in this document revise only the information specifically addressed in the following sections. Previously certified and approved WQMPs remain in effect.

[1] See the formal definition of a water quality management plan in Title 40 Code of Federal Regulations (CFR) 130.2(k).

[2] Fiscal Years 1974, 1975, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984/85, 1986/88, 1989, 1990, 1991, 1992, 1993/94, 1995, 1996, 1997/98, 02/1999, 05/1999, 07/1999, 10/1999, 01/2000, 04/2000, 07/2000, 10/2000, 01/2001, 04/2001, 07/2001, 10/2001, 01/2002, 04/2002, 07/2002, 10/2002, 01/2003, 04/2003, 07/2003, 10/2003, 01/2004, 04/2004, 07/2004, 10/2004, 01/2005, 04/2005, 07/2005, 10/2005, 01/2006, 04/2006, 07/2006, 10/2006, 01/2007, 04/2007, 07/2007, 10/2007, 01/2008, 04/2008, 07/2008, 10/2008, 01/2009, 04/2009, 07/2009, 10/2009, 01/2010, 04/2010, 07/2010,10/2010, 01/2011, 04/2011, 07/2011, 10/2011, BPUB 2011, 01/2012, 04/2012, 07/2012,10/2012, 01/2013, 04/2013, 07/2013,10/2013, 01/2014, 04/2014, 07/2014, 10/2014, 01/2015, 04/2015, 07/2015, 10/2015, 01/2016, 04/2016, 07/2016, 10/2016, 01/2017, 04/2017, 07/2017, 10/2017, 01/2018, 04/2018, 07/2018, 10/2018, 01/2019, Terra Verde 2019, 04/2019, 07/2019, 10/2019, 01/2020, 04/2020, and 07/2020, 10/2020, 01/2021, 04/2021, 07/2021, 10/2021, 01/2022, 04/2022, 07/2022, 10/2022, 01/2023, 04/2023, 7/2023, 10/2023, 01/2024, 04/2024, 07/2024, 10/2024 and 1/2025.

The draft April 2025 WQMP update addresses the following topics for water quality planning purposes:

1. Projected Effluent Limits Updates
2. Service Area Population for Municipal WWTFs
3. Designation of Management Agencies for Municipal WWTFs
4. TMDL Updates

The public comment period for the draft April WQMP update will be from May 16, 2025 through June 17, 2025.

The "Projected Effluent Limit Update" section provides information compiled from February 1, 2025 through April 30, 2025 and is based on Texas water quality standards (WQS). Projected effluent limits may be used for water quality planning purposes in Texas Pollutant Discharge Elimination System (TPDES) permit actions.

The "Service Area Population" and "Designation of Management Agencies" sections for municipal wastewater facilities were developed and evaluated by TCEQ in cooperation with the Texas Water Development Board (TWDB) and regional water quality management planning agencies.

The "Total Maximum Daily Load Update" section provides information on proposed wasteload allocations (WLAs) for new dischargers and revisions to existing TMDLs and was developed by the TCEQ TMDL Program in the Water Quality Planning Division.

Projected Effluent Limit Updates

Table 1 reflects proposed effluent limits for new dischargers and preliminary revisions to original proposed effluent limits for preexisting dischargers. Abbreviations used in the table heading include:

- BOD_5–5-Day Biochemical Oxygen Demand
- $CBOD_5$–5-Day Carbonaceous Biochemical Oxygen Demand
- DO–Dissolved Oxygen
- lbs/day–Pounds per Day
- MGD–Million Gallons per Day
- mg/L–Milligrams per Liter
- NH_3-N–Ammonia-Nitrogen

Effluent flows indicated in Table 1 reflect future needs and do not reflect current permits for these facilities. These revisions may be useful for water quality management planning purposes. The effluent flows and constituent limits indicated in the table have been preliminarily determined to be appropriate to satisfy the stream standards for dissolved oxygen in their respective receiving waters. These flow volumes and effluent sets may be modified at the time of permit action. These limits are based on the Texas WQS effective at the time of the production of this update. The WQS are subject to revision on a triennial basis.

Table 1. Projected Effluent Limit Updates

State Permit Number	Segment Number	EPA ID Number	Permittee Name and County	Flow (MGD)	$CBOD_5$ (mg/L)	$CBOD_5$ (lbs/day)	NH_3-N (mg/L)	NH_3-N (lbs/day)	BOD_5 (mg/L)	BOD_5 (lbs/day)	DO (mg/L)	Months/ Comments
10495-122	1016	TX0103721	City of Houston Harris	11.5	5	384.00	1	95.91			6	Apr-Oct
				11.5	5	384.00	2	191.82			6	Nov-Mar
10880-001	1213	TX0027006	City of Bartlett Bell	0.565	10	47.12	3	14.14			4	
16349-001	1008	TX0144568	249 SH Holdings LLC Montgomery	1.23	5	51.29	1	10.26			6	
16450-001	1808	TX0145394	Catalaunian LLC and Crystal Clear SUD Comal	0.04	5	1.67	2	0.67			4	
16497-001	1009	TX0145726	Hoover WWTP, LLC Waller	0.75	10	62.55	3	18.77			4	
16498-001	1245	TX0145734	Lamar Consolidated Independent School District Fort Bend	0.05	10	4.17	3	1.25			4	
16501-001	1228	TX0145742	TCCI Carrell Ranch WWTP LLC Johnson	0.75	10	62.55	3	18.77			5	

State Permit Number	Segment Number	EPA ID Number	Permittee Name and County	Flow (MGD)	$CBOD_5$ (mg/L)	$CBOD_5$ (lbs/day)	NH_3-N (mg/L)	NH_3-N (lbs/day)	BOD_5 (mg/L)	BOD_5 (lbs/day)	DO (mg/L)	Months/ Comments
16515-001	1010	TX0145874	Mark A. McDonald and Paul D. Smith Montgomery	0.45	10	37.53	3	11.26			5	
16546-001	1015	TX0146072	Keenan South Development, Ltd. Montgomery	0.495	5	20.64	2	8.26			4	
16554-001	1244	TX0146153	NMCV Taylor Property Investors LLC Williamson	0.15	5	6.26	2	2.50			5	
16576-001	1412	TX0146331	Paloma Wastewater Services LLC Midland	0.3	10	25.02	3	7.51			4	
16579-001	0507	TX0146358	Sai Dallas Nevada Ventures LLC Collin	0.21	10	17.51	3	5.25			4	
16586-001	0507	TX0146439	TCCI Josephine WWTP LLC Hunt	1.5	10	125.10	3	37.53			5	
16606-001	1810	TX0146510	GRBK Edgewood, LLC; Stanley C. Kolodzey; Kelly Kolodzey Hays	0.3	5	12.51	2	5.00			4	

State Permit Number	Segment Number	EPA ID Number	Permittee Name and County	Flow (MGD)	$CBOD_5$ (mg/L)	$CBOD_5$ (lbs/day)	NH_3-N (mg/L)	NH_3-N (lbs/day)	BOD_5 (mg/L)	BOD_5 (lbs/day)	DO (mg/L)	Months/ Comments
16620-001	0823	TX0146587	Four Seasons Ranch MUD 1 of Denton County Denton	2	10	166.80	3	50.04			4	
16622-001	1012	TX0146595	Taylor Morrison of Texas, Inc. Montgomery	0.3	5	12.51	1.4	3.50			6	
16624-001	0823	TX0146609	Sanger Laguna Azure LLC Denton	0.95	10	79.23	3	23.77			4	
16628-001	0821	TX0146668	GB878 LLC Collin	0.5	10	41.70	3	12.51			5	

Planning Information Summary

The Water Quality Planning Division of TCEQ coordinated with TWDB and regional planning agencies to compile the wastewater facility information in this section. Domestic facility financing decisions under the State Revolving Fund (SRF) loan program must be consistent with the certified and approved WQMP.

The purpose of this section is to present data reflecting facility-planning needs, including previous water quality management plan needs requiring revision. Data are also presented to update other plan information for TWDB's SRF projects. Table 2 contains the updated service area population information. The table is organized in alphabetical order and includes the following 10 categories of information:

1. *Planning Area* – Area for which facility needs are proposed. The facility planning areas are subject to change during the facility planning process and any such changes will be documented in a later water quality management plan update. All planning areas listed are also designated management agencies (DMAs) unless otherwise noted in the "Comments" column.
2. *Service Area* – Area that receives the provided wastewater service.
3. *Needs* – A "T" indicates a need for either initial construction of a WWTF, additional treatment capacity, or the upgrading of a WWTF to meet existing or more stringent effluent requirements. A "C" indicates a need for improvements to, expansion of, rehabilitation of, or the initial construction of a wastewater collection system in the facility planning area. "T/C" indicates a need for both treatment and collection system facilities. More detailed facility planning conducted during a construction project may define additional needs and those needs will be reflected in a future update to the WQMP. A "F" indicates a need for flood mitigation.
4. *Needs Year* – The year in which the needs were identified for the planning area.
5. *Basin Name* – The river basin or designated planning entity for a designated planning area. The seven water quality management planning areas designated by the Governor are each administered by a Council of Governments (COG), a Development Council (DC), or a Planning Council (PC). Basin names are shown for areas outside one of these planning areas. The designated planning areas and their associated administering entities are:
    a. Corpus Christi – Coastal Bend COG (CBCOG)
    b. Killeen-Temple – Central Texas COG (CTCOG)
    c. Texarkana – Ark-Tex COG (ATCOG)
    d. Southeast Texas – South East Texas Regional Planning Council (SETRPC)
    e. Lower Rio Grande Valley – Lower Rio Grande Valley Development Council (LRGVDC)
    f. Dallas-Fort Worth – North Central Texas COG (NCTCOG)

g. Houston – Houston-Galveston Area Council (H-GAC)

6. *Segment* – The classified stream segment or tributary into which any recommended facility may discharge existing or projected wastewater. In the case of no-discharge facilities, this is the classified stream segment drainage area in which the facilities are located.
7. *County* – The county in which the facility planning area is located.
8. *Date* – The date the planning information was reviewed by TCEQ.
9. *Comments* – Additional explanation or other information concerning the facility planning area.
10. *Population* – The base year and projected populations for each facility planning area. Population projections presented are consistent with the latest available statewide population projections or represent the most current information obtained from facility planning analyses.

The facility information in this section is intended to be used in the preparation of facility plans and the subsequent design and construction of wastewater facilities. Design capacities of the treatment and collection systems will be based upon the population projections contained in this document, plus any additional needed capacity established for commercial/industrial flows and documented infiltration/inflow volumes (treatment or rehabilitation).

The probable needs shown under the "Needs" heading are preliminary findings; specific needs for an area must be as established in the completed and certified, detailed engineering studies conducted during facility planning under the SRF and other state loan programs.

Specific recommended effluent quality for any wastewater discharges resulting from any of the facilities in this document will be in accordance with the rule in the Texas WQS in effect at the time the permit is issued for a specific facility.

Table 2. Service Area Population Updates

Planning Agency	Service Area	Needs	Needs Year	Basin Name / COG	Segment	County	WQMP Date	Comments	Year	Population
City of Stamford	City boundary	T/C	2050	Brazos	1235	Haskell, Jones	3/3/2025		2020	2907
									2030	3059
									2040	3219
									2050	3388
City of De Leon	Project service area	C	2050	Brazos	1223	Bandera	3/4/2025		2024	2171
									2030	2226
									2040	2284
									2050	2361
City of Bridge City	Project service area	T	2029	Sabine	0511	Orange	4/14/2025		2024	10174
									2030	11587
									2040	14062
									2050	17065
City of Cleveland	City Boundary	T	2050	San Jacinto HGAC	1003	Liberty	4/14/2025		2025	7824
									2030	7887
									2040	8017
									2050	8150

Planning Agency	Service Area	Needs	Needs Year	Basin Name / COG	Segment	County	WQMP Date	Comments	Year	Population
City of Pleasanton	City Boundary	T	2040	Nueces	2118	Atascosa	4/14/2025		2024	11400
									2030	12900
									2040	14400
									2050	16000

Designated Management Agencies

To be designated as a management agency for wastewater collection or treatment, an entity must demonstrate the legal, institutional, managerial and financial capability necessary to carry out the entity's responsibilities in accordance with Section 208(c) of the CWA (see below list of requirements). Before an entity can apply for an SRF loan, it must be recommended for designation as the management agency in the approved WQMP.

Designation as a management agency does not require the designated entity to provide wastewater services, but enables it to apply for grants and loans to provide those services. The facilities listed in Table 3 have submitted DMA resolutions to TCEQ. TCEQ submits this DMA information to EPA for approval as an update to the WQMP.

Section 208 (c) (2) Requirements for Management Agency

208(c)(2)(A): to carry out portions of an area-wide waste treatment plan.
208(c)(2)(B): to manage waste treatment works.
208(c)(2)(C): directly or by contract to design and construct new works.
208(c)(2)(D): to accept and utilize grants.
208(c)(2)(E): to raise revenues, including assessment of waste treatment charges.
208(c)(2)(F): to incur short and long term indebtedness.
208(c)(2)(G): to assure community pays proportionate cost.
208(c)(2)(H): to refuse to receive waste from non-compliant dischargers.
208(c)(2)(I): to accept for treatment industrial wastes.

Table 3. Designated Management Agencies

Planning Agency	Service Area	DMA Needs	DMA Date
City of Stamford	City boundary	T/C	3/3/2025
City of De Leon	Project service area	C	3/4/2025
City of Bridge City	Project service area	T	4/14/2025
City of Cleveland	City Boundary	T	4/14/2025
City of Pleasanton	City Boundary	T	4/14/2025

Total Maximum Daily Load Revisions

The TMDL Program works to improve water quality in impaired or threatened waters bodies in Texas. The program is authorized by and created to fulfill the requirements of Section 303(d) of the CWA.

The goal of a TMDL is to restore the full use of a water body that has limited quality in relation to one or more of its uses. The TMDL defines an environmental target, and based on that target, TCEQ and stakeholders develop an implementation plan with WLAs for point source dischargers to mitigate human-caused sources of pollution within the watershed and restore full use of the water body.

TMDLs are developed based on intensive data collection and scientific analysis. After adoption by TCEQ, TMDLs are submitted to EPA for review and approval.

The attached appendixes may reflect proposed WLAs for new dischargers and/or additions or revisions to TMDLs. Updates and addendums will be provided in the same units of measure used in the original TMDL document and will include the segment and assessment unit (AU) numbers of the affected segments. Also, note that for bacteria TMDLs, loads will typically be expressed as colony-forming units per day (cfu/day). On occasion, other expressions may be used due to different laboratory methods, such as counts or most probable number per day. For the purposes of the TMDL program, these terms are considered to be synonymous.

Appendix I. Updates to One TMDL for Indicator Bacteria in Cotton Bayou Tidal

AU 0801C_01

This appendix provides updates to a TMDL previously submitted through the state's WQMP for: Cotton Bayou Tidal (0801C).

The report, *One Total Maximum Daily Load for Indicator Bacteria in Cotton Bayou Tidal for Assessment Unit 0801C_01,* was adopted by TCEQ on May 22, 2024 and approved by EPA on July 26, 2024. Upon EPA approval, the TMDL became part of the state's WQMP.

The Texas WQMP has since been updated twice prior to this update for this TMDL. The previous update revised the list of individual WLAs in the original TMDL document.

The purpose of this update is to make the following changes to the TMDL (presented in Table I-1):

- Add one new permit.
- Reduce flow for an existing permit.

The changes reflected in this update resulted in the shifting of allocations between the sum of the individual WLAs and the allowance for future growth (FG) in one assessment unit (AU). This was originally presented in Table 17 in the original TMDL document. The affected AU in this update is included here as Table I-2.

In Table 18 of the original TMDL, the WLA for permitted facilities is the sum of the individual WLAs and the allowance for FG within the TMDL AU. The overall number for the AU did not change, and this resulted in no changes to the overall TMDL allocations. Please note that some calculations completed in the remainder of this appendix have been rounded and may not lead to the exact final amounts listed in the tables.

Table I-1 - Changes to individual WLAs for the TMDL watershed

Updates Table 11, p. 35 in the original TMDL document.

The WLA is expressed in billion cfu/day Enterococci.

AU	State Permit Number	Outfall	Permittee Name	Flow (MGD)	WLA	TMDL Comments
0801E_01	16120-001	1	GOLIVE ACQUISITIONS LLC	0.015	0.020	New permit
0801E_01	16031-001[a]	1	PARKLAND DEVELOPMENT LLC	0.1	0.132	Reduced flow

Abbreviations: MGD – million gallons per day

[a] Permit listed in the original TMDL.

Table I-2 - TMDL summary calculations for one AU in the TMDL watershed

Updates Table 17, p. 41 in the original TMDL document.

All loads expressed as billion cfu/day Enterococci.

AU	TMDL	WLA_{WWTF}	WLA_{SW}	LA	FG	MOS
0801C_01	89.169	6.766	24.389	45.068	8.488	4.458

Abbreviations: WLA_{wwtf} – Wasteload Allocation for Wastewater Treatment Facilities, WLA_{sw} – Wasteload Allocation for Regulated Stormwater, LA – Load Allocation, MOS – Margin of Safety

Appendix II. Updates to Seven TMDLs for Indicator Bacteria in Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek Watersheds

Segments 1002, 1003, 1004, and 1004D

This appendix provides updates to TMDLs previously submitted through the state's WQMP for: Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek Watersheds.

The report, *Seven Total Maximum Daily Loads for Indicator Bacteria in Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek Watersheds for Segments 1002, 1003, 1004, and 1004D,* was adopted by TCEQ on August 24, 2016 and approved by EPA on October 7, 2016. Upon EPA approval, the TMDLs became part of the state's WQMP.

The Texas WQMP has since been updated 18 times prior to this update for these TMDLs. The previous updates have revised the list of individual WLAs in the original TMDL document. Additionally, TCEQ has submitted several addenda related to the original TMDLs in the October 2018 WQMP update, the January 2023 WQMP update, and, most recently, the April 2024 WQMP update. These addenda added three new AUs to the original TMDL project.

The purpose of this update is to make the following changes to the TMDLs (presented in Table II-1):

- Add one new permit.

The changes reflected in this update resulted in the shifting of allocations between the sum of the individual WLAs and the allowance for FG in three AUs. This was originally presented in Table 17 in the original TMDL document. The affected AU in this update is included here as Table II-2. Please note that some calculations completed in the remainder of this appendix have been rounded and may not lead to the exact final amounts listed in the tables.

Table II-1 - Changes to individual WLAs for the TMDL watersheds

Updates Table 13, p. 54-55 in the original TMDL document.

The WLA is expressed in billion MPN/day *E. coli*.

State Permit Number	Outfall	EPA Permit Number	AU	Permittee Name	Flow (MGD)	WLA	TMDL Comments
16546-001	001	TX0146072	1015A_01[a]	KEENAN SOUTH DEVELOPMENT, LTD.	0.495	1.1805	New permit

[a] Mound Creek (1015A) is a tributary to Lake Creek, which discharges to West Fork San Jacinto River AU 1004_02.

Table II-2 - TMDL summary calculations for three AUs in the TMDL watersheds

Updates Table 17, p. 59 in the original TMDL document.

All loads expressed as billion MPN/day *E. coli*.

AU	Segment Name	TMDL	MOS	WLA WWTF	WLA SW	LA AU	LA TRIB	LA RES	LA TOTAL	FG
1002_06	Lake Houston	6,197	106.57	110.11	288.17	1,535.70	3,106.90	958.7	5,601.30	90.85
1004_01	West Fork San Jacinto River	2,779	88.77	106.83	196.81	1,294.21	44.86	958.7	2,297.77	88.82
1004_02	West Fork San Jacinto River	1,141	9.12	50.22	4.04	75.26	0	958.7	1,033.96	43.66

In addition, Table II-3 below provides an update to Table 9 found in the October 2018 addendum to this TMDL project (*Addendum One to Seven Total Maximum Daily Loads for Indicator Bacteria in Lake Houston, East Fork San Jacinto River, West Fork San Jacinto River, and Crystal Creek Watersheds: One Total Maximum Daily Load for Indicator Bacteria in Mound Creek For Segment 1015A, Assessment Unit 1015A_01*). One of the new permits discussed earlier in this update also affects an AU in this addendum.

Table II-4 below provides an update to Table 10 found in the October 2018 addendum to this TMDL project. The addendum added one AU that was not included in the original TMDL. This AU (1015A_01) was included as a contributing loading to AUs 1002_06, 1004_01, and 1004_02 in the original TMDL document. The permit for one new facility (16546-001/TX0146072) affects the loadings of both 1015A_01 as well as the original TMDL AUs 1002_06, 1004_01, and 1004_02.

For AU 1015A_01, the existing FG allocation was insufficient to cover the increased flow to the AU for this update. To account for this, the total amount exceeded beyond the original FG allocation was added to the total TMDL allocation for AU 1015A_01. This

change in flow resulted in a change to the overall TMDL allocation for the AU, which have been updated in Tables II-4 and II-5.

Table II-3 - Changes to individual WLAs for the TMDL addendum watershed

Updates Table 9, p. 19 in the TMDL addendum document.

The WLA is expressed in billion MPN/day *E. coli*.

State Permit Number	Outfall	EPA Permit Number	AU	Permittee Name	Flow (MGD)	WLA	TMDL Comments
16546-001	001	TX0146072	1015A_01	KEENAN SOUTH DEVELOPMENT, LTD.	0.495	1.1805	New permit

Table II-4 - TMDL summary calculations for one AU in the TMDL addendum watershed

Updates Table 10, p. 20 in the TMDL addendum document.

All loads expressed as billion MPN/day *E. coli*.

AU	Segment Name	TMDL	MOS	WLA WWTF	WLA SW	LA	FG
1015A_01	Mound Creek	83.966	4.122	3.124	0.614	76.106	0.000

Table II-5 – Final TMDL calculations for one AU in the TMDL addendum watershed

Updates Table 11, p. 21 in the TMDL addendum document.

All loads expressed as billion MPN/day *E. coli*.

AU	Segment Name	TMDL	WLA WWTF	WLA SW	LA	MOS
1015A_01	Mound Creek	83.966	3.124	0.614	76.106	4.122

Appendix III. Update to Four TMDLs for Indicator Bacteria in Halls Bayou and Tributaries

Assessment Units 1006D_01, 1006D_02, 1006I_01, and 1006J_01

This appendix provides updates to TMDLs previously submitted through the state's WQMP for: Halls Bayou and Tributaries (1006D, 1006I, and 1006J).

The report, *Four Total Maximum Daily Loads for Indicator Bacteria in Halls Bayou and Tributaries For Segment Numbers 1006D, 1006I, and 1006J,* was adopted by TCEQ on September 15, 2010 and approved by EPA on September 27, 2010. Upon EPA approval, the TMDLs became part of the state's WQMP.

The Texas WQMP has since been updated nine times prior to this update for these TMDLs. The previous updates have revised the list of individual WLAs in the original TMDL document.

The purpose of this update is to make the following changes to the TMDLs (presented in Table III-1):

- Withdraw one existing permit.
- Remove one expired permit.

The changes reflected in this update resulted in the shifting of allocations between the sum of the individual WLAs and the allowance for FG in two AUs. The WLA allocation was originally presented in Table 18 in the original TMDL document. The two affected AUs in this update are included here as Table III-2.

In Table 19 of the original TMDL, the WLAs for permitted facilities are the sum of the individual WLAs and the allowance for FG within each AU. These overall numbers did not change; Table 19 of the original TMDL remains the same. Please note that some calculations completed in the remainder of this appendix have been rounded and may not lead to the exact final amounts listed in the tables.

Table III-1 - Changes to individual WLAs for the Halls Bayou watershed

Updates Table 16, p. 35-36 in the original TMDL document.

The WLA is expressed in *E. coli* billion MPN/day.

State Permit Number	Outfall	EPA Permit Number	AU	Permittee Name	Flow (MGD)	Waste Load Allocation (WLA)	TMDL/ Comments
12882-001	001	TX0094986[a]	1006D_02	SOLHJOU BAHRAM	NA	NA	Withdrawn permit
13767-001	001	TX0095656[a]	1006D_02	FATIMA FAMILY VILLAGE INC.	NA	NA	Expired permit

Abbreviations: NA – not applicable

[a] Permit listed in the original TMDL.

Table III-2 - TMDL summary calculations for two AUs in the Halls Bayou watershed

Updates Table 18, p. 41 in the original TMDL document.

All loads expressed as billion MPN/day.

AU	Sampling Location	Stream Name	TMDL	WLA WWTF	WLA SW	LA	MOS	Future Growth
1006D_01	20023	Halls Bayou	463	42.65	385.40	0.00	23.20	11.75
1006D_02	11126	Halls Bayou	280	25.72	233.00	0.00	14.00	7.28

Appendix IV. Updates to Fifteen TMDLs for Indicator Bacteria in Watersheds Upstream of Lake Houston

Segments 1004E, 1008, 1008H, 1009, 1009C, 1009D, 1009E, 1010, and 1011

This appendix provides updates to TMDLs previously submitted through the state's WQMP for: Watersheds Upstream of Lake Houston.

The report, *Fifteen Total Maximum Daily Loads for Indicator Bacteria in Watersheds Upstream of Lake Houston for Segment Numbers 1004E, 1008, 1008H, 1009, 1009C, 1009D, 1009E, 1010, and 1011,* was adopted by TCEQ on April 6, 2011 and approved by EPA on June 29, 2011. Upon EPA approval, the TMDLs became part of the state's WQMP.

The Texas WQMP has since been updated 48 times prior to this update for these TMDLs. The previous updates have revised the list of individual WLAs in the original TMDL document. Additionally, TCEQ submitted four addenda to the original TMDLs in the October 2013, October 2019, October 2020, and April 2022 WQMP updates. These addenda added 10 new AUs to the original TMDL project.

The purpose of this update is to make the following changes to the TMDLs (presented in Table IV-1):

- Add two new permits.

The changes reflected in this update resulted in the shifting of allocations between the sum of the individual WLAs and the allowance for FG in six AUs. This was originally presented in Table 18 in the original TMDL document. The six affected AUs in this update are included here as Table IV-2.

For AUs 1009_01 and 1009_02, the existing FG allocations were insufficient to cover the increased flow to the AUs for this update. To account for this, the total amount exceeded beyond the original FG allocation was added to the total TMDL allocation for each AU. These changes in flow resulted in a change to the overall TMDL allocation for both AUs, which have been updated in Tables IV-2 and IV-3. The overall numbers for the other AUs did not change and did not result in a change to the overall TMDL allocations. Please note that some calculations completed in the remainder of this appendix have been rounded and may not lead to the exact final amounts listed in the tables.

Table IV-1 - Changes to individual WLAs for the TMDL watershed

Updates Table 16, p. 49-56 in the original TMDL document.

The WLA is expressed in billion MPN/day *E. coli*.

State Permit Number	Outfall	EPA Permit Number	AU	Permittee Name	Flow (MGD)	WLA	TMDL Comments
16349-001	001	TX0144568	1008_03	249 SH HOLDINGS LLC	1.23	2.933	New permit
16497-001	001	TX0145726	1009_01	HOOVER WWTP, LLC	0.75	1.789	New permit

Table IV-2 - TMDL summary calculations for six AUs in the TMDL watershed

Updates Table 18, p. 61 in the original TMDL document.

All loads expressed as billion MPN/day *E. coli*.

AU	Sampling Location	Segment Name	TMDL	WLA $_{WWTF}$	WLA $_{SW}$	LA	MOS	FG
1008_03	11313	Spring Creek	1420	145.17	322	869	70.9	12.93
1008_04	11312	Spring Creek	1510	180.84	334	902	75.7	17.46
1009_01	11333	Cypress Creek	241.35	32.05	83.1	114.8	11.4	0.00
1009_02	11331	Cypress Creek	616.06	119.26	196	270	30.8	0.00
1009_03	11328	Cypress Creek	1340	203.04	415	574	67.0	80.96
1009_04	11324	Cypress Creek	1550	241.40	469	648	77.4	114.20

Table IV-3 - TMDL final calculations

Updates Table 19, p. 62 in the original TMDL document.

All loads expressed as billion MPN/day *E. coli*.

AU	TMDL	WLA $_{WWTF}$	WLA $_{SW}$	LA $_{TOTAL}$	MOS
1009_01	241.35	32.05	83.1	114.8	11.4
1009_02	616.06	119.26	196	270	30.8