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FINAL

# **July 2017 Update to the Texas Water Quality Management Plan**





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Prepared by the  
Office of Water  
Water Quality Division

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WQMP updates are also available on the TCEQ web site at:

< [http://www.tceq.texas.gov/permitting/wqmp/WQmanagement\\_updates.html](http://www.tceq.texas.gov/permitting/wqmp/WQmanagement_updates.html) >

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



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**Table of Contents**

Introduction .....1  
Projected Effluent Limit Updates .....3  
Planning Information Summary .....6  
Designated Management Agencies .....9  
Total Maximum Daily Load Updates .....10

**Tables**

Table 1. Projected Effluent Limit Updates ..... 4  
Table 2. Service Area Population Updates ..... 8  
Table 3. Designated Management Agencies ..... 9

**Appendix**

Appendix I. 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 ..... 11

# Introduction

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

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 Clean Water Act 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. The 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 ground water 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<sup>2</sup>, will become part of the WQMP after completion of its public participation process, certification by the 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 water quality management plans remain in effect.

The July 2017 WQMP update addresses the following topics:

1. Projected Effluent Limits Updates for water quality planning purposes
2. Service Area Population for Municipal Wastewater Facilities
3. Designation of Management Agencies for Municipal Wastewater Facilities
4. Total Maximum Daily Load Updates

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<sup>1</sup> A formal definition for a water quality management plan is found in 40 Code of Federal Regulations (CFR) 130.2(k).

<sup>2</sup> 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, and 04/2017.

The public comment period for the July WQMP update was from August 11, 2017 through September 12, 2017.

The Projected Effluent Limit Update section provides information compiled from May 1, 2017 through July 31, 2017, and is based on water quality standards, and 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 Agency sections for municipal wastewater facilities has been developed and evaluated by the TCEQ in cooperation with the Texas Water Development Board (TWDB) and regional water quality management planning agencies.

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

## Projected Effluent Limit Updates

Table 1 reflects proposed effluent limits for new dischargers and preliminary revisions to original proposed effluent limits for preexisting dischargers (MGD-Million Gallons per Day, CBOD<sub>5</sub> – 5 Day Carbonaceous Biochemical Oxygen Demand, NH<sub>3</sub>-N – Ammonia-Nitrogen, BOD<sub>5</sub> – 5 Day Biochemical Oxygen Demand and DO – Dissolved Oxygen).

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 water quality standards (WQS) effective at the time of the TCEQ production of this update. 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 County	Flow (MGD)	CBOD <sub>5</sub> (mg/L)	CBOD <sub>5</sub> (lbs/day)	NH <sub>3</sub> -N (mg/L)	NH <sub>3</sub> -N (lbs/day)	BOD <sub>5</sub> (mg/L)	BOD <sub>5</sub> (lbs/day)	DO (mg/L)	Months/ Comments
10245-001	2311	TX0137693	Town of Pecos City Reeves	1.6	5	66.72	2	26.69			6	
11371-001	1012	TX0022080	Montgomery County MUD No. 8 Walden	1.65	5	68.81	1	13.76			6	
14116-001	1010	TX0071412	Montgomery County MUD No. 24 Montgomery	0.39	10	32.53	3	9.76			5	
14379-001	1010	TX0125300	East Montgomery County MUD No. 3 Montgomery	0.60	10	50.04	3	15.01			4	
15158-001	1008	TX0134864	Aqua Texas, Inc. Harris	0.625	10	52.13	3	15.64			4	
15463-002	1202	TX0137707	Twinwood (U.S.), Inc. Fort Bend	0.015	10	1.25	3	0.38			4	
15556-001	1209	TX0137570	Smiling Mallard Development, Ltd. Brazos	0.250	10	20.85	3	6.26			4	
15577-001	0514	TX0137766	Holly Lake Condominium Association, Inc. Wood	0.016					20	2.67	2	

<b>State Permit Number</b>	<b>Segment Number</b>	<b>EPA ID Number</b>	<b>Permittee Name County</b>	<b>Flow (MGD)</b>	<b>CBOD<sub>5</sub> (mg/L)</b>	<b>CBOD<sub>5</sub> (lbs/day)</b>	<b>NH<sub>3</sub>-N (mg/L)</b>	<b>NH<sub>3</sub>-N (lbs/day)</b>	<b>BOD<sub>5</sub> (mg/L)</b>	<b>BOD<sub>5</sub> (lbs/day)</b>	<b>DO (mg/L)</b>	<b>Months/ Comments</b>
15578-001	1009	TX0137774	SSPS Properties, L.L.C. Harris	0.012	7	0.70	2	0.20			5	
15581-001	1002	TX0137791	United Front Shepherd, L.L.C. San Jacinto	0.0205	10	1.71	3	0.51			6	

## Planning Information Summary

The Water Quality Planning Division of the TCEQ coordinated with the TWDB and regional planning agencies to compile the wastewater facility information in this section. Domestic facility financing decisions under the State Revolving Loan Fund (SRF) 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 the 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 wastewater treatment plant, additional treatment capacity, or the upgrading of a wastewater treatment plant 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.
4. Needs Year – The year in which the needs were identified for the planning area.
5. Basin Name – The river basin or designated planning area where the entity is located. The seven water quality management planning areas designated by the Governor are Corpus Christi [Coastal Bend Council of Governments (CBCOG)], Killeen-Temple [Central Texas Council of Governments (CTCOG)], Texarkana [Ark-Tex Council of Governments (ATCOG)], Southeast Texas [South East Texas Regional Planning Council (SETRPC)], Lower Rio Grande Valley [Lower Rio Grande Valley Development Council (LRGVDC)], Dallas-Fort Worth [North Central Texas Council of Governments (NCTCOG)] and Houston [Houston-Galveston Area Council (H-GAC)]. Basin names are shown for agencies outside one of these areas.
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 the 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 utilized 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 shall be as established in the completed and certified detailed engineering studies conducted during facility planning under the SRF and other state loan programs.

Specific effluent quality for any wastewater discharges resulting from any of the facilities recommended in this document will be in accordance with the rule on the Texas Surface Water Quality Standards in effect at the time of permit issuance for the 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 Blanco	City Limits	T	2017	Trinity River Basin	1813	Blanco	5/12/2017	Rehabilitation of WWTP	2016	2,125
									2020	2,247
									2030	2,672
									2040	2,921
City of Cotulla	City Limits	T/C	2017	Nueces River Basin	2105	LaSalle	7/31/2017	Rehabilitation of WWTP and collection system improvements	2015	3,842
									2020	4,069
									2030	4,457
									2040	4,457
City of Dallas	City Limits	C	2017	Trinity River Basin / NCTCOG	0805, 0819, 0820, 0822, 0827, 0841	Dallas	5/12/2017	Collection system improvements	2020	1,242,136
									2030	1,347,717
									2040	1,531,680
City of Ector	City Limits	T	2017	Red River Basin	0202	Fannin	7/17/2017	Rehabilitation of WWTP	2016	412
									2020	412
									2025	412
									2040	572
City of Ennis	City Limits	T/C	2017	Trinity River Basin / NCTCOG	0814	Ellis	7/17/2017	Rehabilitation of WWTP and collection system improvements	2016	18,711
									2020	22,000
									2030	26,000
									2040	30,000
City of Farmersville	City Limits	T	2017	Trinity River Basin / NCTCOG	0821	Collin	6/8/2017	Rehabilitation of WWTP	2016	1,410
									2020	8,000
									2030	20,000
									2040	20,000
City of Huntington	City Limits	T	2017	Neches River Basin	0604	Angelina	5/12/2017	Rehabilitation of WWTP	2016	2,306
									2020	2,598
									2030	2,958
									2040	3,412
City of Savoy	City Limits	T	2017	Red River Basin	0202	Fannin	7/17/2017	<b>Review found the project to be in nonconformance with the WQMP. Requires amended or new permit for increased flow and effluent limits.</b>	2016	831
									2020	924
									2030	1,086
									2040	1,355
San Jacinto River Authority	Woodlands Wastewater System Limits	T/C	2017	San Jacinto-Brazos Coastal Basin / H-GAC	1008	Montgomery	7/25/2017	Rehabilitation of WWTP and collection system improvements	2010	93,846
									2020	116,147
									2030	123,378
									2040	130,848

## Designated Management Agencies

In order 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 Clean Water Act (see below list of requirements). Before an entity can apply for a state revolving fund 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 the services. The facilities listed in Table 3 have submitted Designated Management Agencies (DMA) resolutions to the TCEQ. The TCEQ submits this DMA information to the 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	DMA Comments
City of Blanco	City Limits	T	3/14/2017	
City of Cotulla	City Limits	T/C	8/17/2016	
City of Dallas	City Limits	C	5/1/2017	City Code Chapter 49 and City Charter submitted in lieu of DMA. Provisionally signed off on by TWDB, pending meeting with lawyers from TCEQ and TWDB.
City of Ector	City Limits	T	1/16/2017	
City of Ennis	City Limits	T/C	4/4/2017	
City of Farmersville	City Limits	T	3/14/2017	
City of Huntington	City Limits	T	4/25/2017	
<b>City of Savoy</b>	<b>City Limits</b>	<b>T</b>	<b>4/18/2017</b>	<b>Review found project to be in nonconformance with WQMP.</b>
San Jacinto River Authority (SJRA)	Woodlands Division Limits	T/C	3/23/2017	SJRA is the DMA for the Woodlands Wastewater System.

## Total Maximum Daily Load Updates

The Total Maximum Daily Load (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 federal Clean Water Act.

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, the State develops an implementation plan with wasteload allocations for point source dischargers to mitigate anthropogenic (human-caused) sources of pollution within the watershed and restore full use of the water body.

The development of TMDLs is a process of intensive data collection and analysis. After adoption by the TCEQ, TMDLs are submitted to the EPA for review and approval.

The attached appendices may reflect proposed wasteload allocations for new dischargers and revisions to TMDLs. To be consistent, updates will be provided in the same units of measure used in the original TMDL document. Also note that for bacteria TMDLs, loads may be expressed in counts per day, organisms per day, colony forming units per day, or similar expressions. These typically reflect different lab methods, but for the purposes of the TMDL program, these terms are considered synonymous.

## **Appendix I. 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**

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TMDL Updates to the Water Quality Management Plan (WQMP): Watersheds Upstream of Lake Houston (1004E, 1008, 1008H, 1009, 1009C, 1009D, 1009E, 1010, and 1011)

The document *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 the TCEQ on 04/06/11 and approved by EPA on 06/29/11, and became an update to the state's WQMP. Twenty-one subsequent WQMP updates prior to this one have updated the list of individual wasteload allocations (WLAs) found in the original TMDL document. Additionally, an addendum to the original TMDL was submitted through the October 2013 WQMP update. This addendum added six new assessment units (AUs) to the original TMDL project.

The purpose of this update is to make the following changes to the TMDL, presented in Table 1:

- remove four expired permits,
- add one new permit,
- update the WLAs for three facilities that have increased their permitted discharges, and
- update the name of one 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 in nine AUs. This was originally presented in Table 18 in the original TMDL document, and the nine affected AUs are included here as Table 2.

In Table 19 of the original TMDL, the WLAs for permitted facilities are the sum of the individual WLAs and the allowance for future growth within each AU. Therefore, these overall numbers did not change, and Table 19 of the TMDL remains the same.

Table 1 – Changes to Individual Wasteload Allocations (Updates Table 16, pp. 49-56 in the TMDL document.)

State Permit Number	Outfall	EPA Permit Number	Segment Number	Permittee Name	Flow (MGD)	Waste Load Allocation (WLA) – <i>E. coli</i> in Billion MPN/day	TMDL Comments
15578-001	001	TX0137774	1009E_01	SSPS PROPERTIES, LLC	0.012	0.029	New permit
14116-001	001	TX0071412	1010_04	MONTGOMERY CO MUD # 24	0.39	0.930	Increased discharge
14379-001	001	TX0125300	1010_04	EAST MONTGOMERY CO MUD #3	0.6	1.431	Increased discharge
15158-001	001	TX0134864	1008_03	AQUA TEXAS, INC.	0.625	1.491	Increased discharge; updated name
15044-001	001	TX0133639	1009_01	COMMUNITY OF FAITH	NA	NA	Permit expired
14083-001	001	TX0118818	1010_04	WHITE OAK DEVELOPERS, INC.	NA	NA	Permit expired
14559-001	001	TX0127094	1010_04	WHITESTONE HOUSTON LAND, LTD.	NA	NA	Permit expired
15145-001	001	TX0134805	1011_01	BRADBURY DEVELOPMENT, LTD	NA	NA	Permit expired

Table 2 - *E. coli* TMDL Summary Calculations for Lake Houston Assessment Units (Updates Table 18, pp. 61 in the TMDL document.)

Assessment Unit	Sampling Location	Stream Name	TMDL (Billion MPN/day)	WLA <sub>WWTF</sub> (Billion MPN/day)	WLA <sub>StormWater</sub> (Billion MPN/day)	LA (Billion MPN/day)	MOS (Billion MPN/day)	Future Growth (Billion MPN/day)
1008_03	11313	Spring Creek	1420	100.33	322	869	70.9	57.77
1008_04	11312	Spring Creek	1510	136.00	334	902	75.7	62.30
1009_01	11333	Cypress Creek	227	17.48	83.1	114.8	11.4	0.22
1009_02	11331	Cypress Creek	615	85.45	196	270	30.8	32.75
1009_03	11328	Cypress Creek	1340	170.90	415	574	67.0	113.10
1009_04	11324	Cypress Creek	1550	209.42	469	648	77.4	146.18
1009E_01	14159	Little Cypress Creek	91.1	12.36	16.14	48.42	4.56	9.62
1010_04	11334	Caney Creek	493	16.07	57.4	383.8	24.7	11.03
1011_02	17746	Peach Creek	422	4.23	34.5	348.5	21.1	13.67

In addition, Table 3 below provides an update to Table 11 found in the October 2013 addendum to this TMDL project (*Addendum One to Fifteen Total Maximum Daily Loads for Indicator Bacteria in Watersheds Upstream of Lake Houston: Six Additional Total Maximum Daily Loads for Indicator Bacteria in Watersheds Upstream of Lake Houston For Segments 1008B, 1008C, 1008E, and 1011 Assessment Units 1008B\_01, 1008B\_02, 1008C\_01, 1008C\_02, 1008E\_01, and 1011\_01*). One of the expired permits discussed earlier in this update also affects an AU in this addendum.

Table 4 below provides updates to Table 12 found in the October 2013 addendum to this TMDL project. The addendum added six AUs that were not included in the original TMDL. Five of these (1008B\_01, 1008B\_02, 1008C\_01, 1008C\_02, and 1008E\_01) were lumped together as contributing loading to 1008\_03 and 1008\_04 in the original TMDL. The sixth additional AU (1011\_01) was treated as an upstream contributing load to 1011\_02 in the original TMDL. The permit for one facility (15145-001/ TX0134805) that was permitted to discharge to 1011\_01 has expired, affecting the loadings of both 1011\_01 as well as the original TMDL AU 1011\_02.

Table 3 – Changes to Individual Waste Load Allocations and Permittee Names (Updates Table 11, p. 23 in the TMDL Addendum document.)

State Permit Number	Outfall	EPA Permit Number	Segment Number	Permittee Name	Flow (MGD)	Waste Load Allocation (WLA) – <i>E. coli</i> in Billion MPN/day	TMDL Comments
15145-001	001	TX0134805	1011_01	BRADBURY DEVELOPMENT, LTD	NA	NA	Permit expired

Table 4 – *E. coli* TMDL Summary for Impaired AUs of the Addendum (Updates Table 12, p. 26 in the TMDL Addendum document.) Loads are in billion MPN/day.

AU	Stream Name	TMDL	MOS	WLA <sub>WWTF</sub>	WLA <sub>SW</sub>	LA <sub>AU</sub>	LA <sub>RES</sub>	LA <sub>TOTAL</sub>	Future Growth
1011_01	Peach Creek	214.1	10.7	0.81	3.05	198.1	0	198.1	1.44

In Table 13 of the TMDL addendum, the WLAs for permitted facilities are the sum of the individual WLAs and the allowance for future growth within each assessment unit. Therefore, these overall numbers did not change, and Table 13 of the TMDL addendum remains the same.