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FINAL

April 2019 Update to the Texas Water Quality Management Plan



April 2019 Update to the Texas Water Quality Management Plan

Prepared by the
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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 >

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



Jon Niermann, *Chairman*
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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

Appendices

Appendix I. Eighteen Total Maximum Daily Loads for Bacteria in Buffalo and Whiteoak Bayous
and Tributaries For Segment Numbers 1013, 1013A, 1013C, 1014, 1014A, 1014B,
1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D,
and 1017E..... 11
Appendix II. One Total Maximum Daily Load for Bacteria in in Gilleland Creek: Segment 1428C
..... 13
Appendix III. 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 14
Appendix IV. One Total Maximum Daily Load for Bacteria in Upper Oyster Creek for Segment
Number 1245 16
Appendix V. Two Total Maximum Daily Loads for Dissolved Oxygen in Upper Oyster Creek:
Segment Number 1245 17

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.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 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 updates², 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 April 2019 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 Update

¹ A formal definition for a water quality management plan is found in 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 and 01/2019.

The public comment period for the April WQMP update was from May 10, 2019 through June 10, 2019.

The Projected Effluent Limit Update section provides information compiled from February 1, 2019 through April 30, 2019, 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, CBOD₅ – 5 Day Carbonaceous Biochemical Oxygen Demand, NH₃-N – Ammonia-Nitrogen, BOD₅ – 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 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
10219-002	1246	TX0023914	City of McGregor McLennan	1.67	5	69.64	1.7	23.68			6	
11845-002	1428	TX0094927	City of Pflugerville Travis	10.0	5	417.00	2	166.80			6	
12458-002	1202	TX0089028	Texas Dept. Of Criminal Justice Grimes	0.801	10	66.80	3	20.04			4	
13960-001	1012	TX0118851	US Land Corp. Montgomery	0.075	10	6.26	3	1.88			5	
14635-001	1014	TX0128082	Harris County Mud No. 449 Harris	0.99	5	41.28	1.8	14.86			6	
15693-001	0821	TX0138584	North Texas Municipal Water District Collin	64.0	5	2668.80	1.2	640.51			6	
				64.0	10	5337.60	2	1067.52			6	
15719-001	0506	TX0138720	Whispering Pines RV Resort, L.L.C. Smith	0.03	10	2.50	3	0.75			4	MOA
15725-002	2311	TX0138983	Quail Run Services, L.L.C. Reeves	0.30	10	25.02	3	7.51			4	
15738-001	1808	TX0138835	Cherryville GP, Inc. & Cherryville #5 Ltd. Caldwell	0.160	10	13.34	3	4.00			4	
15745-001	1009	TX0138878	Golden Shamrock Realty, Inc. Harris	0.99	7	57.80	2	16.51			6	

State Permit Number	Segment Number	EPA ID Number	Permittee Name 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
15746-001	1009	TX0138886	Humble Joint Venture 1, L.L.C. Harris	0.30	10	25.02	3	7.51			4	
15749-001	1014	TX0138908	Landmark Industries Harris	0.75	7	43.79	2	12.51			4	
15750-001	1428	TX0138916	South 9 L.L.C. Travis	0.039	5	1.63	2	0.65			4	
15751-001	1402	TX0138924	Lantana at Round Top L.L.C. & Round Top Compound, L.L.C. Fayette	0.04					10	3.34	4	
15753-001	0821	TX0138959	AIRW 2017-7, L.P. Collin	0.18	10	15.01	3	4.50			4	
15764-001	1412	TX0139025	Cotton Logistics, Inc. Midland	0.035					20	5.84	2	
15765-001	1009	TX0139017	McNabb Utilities, L.L.C. Harris	0.085	10	7.09	3	2.13			4	
15772-001	1014	TX0139106	Harris County MUD No. 465 Harris	0.40	7	23.35	2	6.67			4	
15777-001	1202	TX0139757	Summer Breeze USA Katy, L.L.C. Waller	0.025	10	2.09	3	0.63			4	

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. 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 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 Dripping Springs	City Limits	T	2019	Colorado River Basin	1427	Hays	5/1/2019	WWTP expansion	2020	5,635
									2025	14,000
									2030	21,500
									2035	26,800
City of Laredo	City Limits	T	2019	Rio Grande	2304	Webb	5/1/2019	New 4.75 MGD WWTP	2025	268,473
									2030	281,992
									2035	310,791
									2040	326,331
Nacogdoches County MUD	District Boundary	C	2019	Neches	NA	Nacogdoches	5/1/2019	Replacement of lines and lift station	2020	199
									2025	224
									2030	248
									2035	301
San Antonio Water System	Bexar County	T	2018	San Antonio River	1910/1911	Bexar	5/1/2019	Electrical system improvements at Dos Rios and Leon Creek WRCs	2018	1,691,943
									2020	1,812,792
									2030	2,056,014
									2040	2,287,677
Woodloch	Town Limits	T	2018	HGAC	1004	Montgomery	5/1/2019	New 0.15 MGD WWTP	2020	836
									2025	836
									2030	836
									2035	836

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
City of Dripping Springs	City Limits	T	9/25/2018
City of Laredo	City Limits	T	2/21/2012
Nacogdoches County MUD	District Boundary	C	4/12/2019
San Antonio Water System	Bexar County	T	5/17/2017
Woodloch	Town Limits	T	8/30/2018

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. Eighteen Total Maximum Daily Loads for Bacteria in Buffalo and Whiteoak Bayous and Tributaries For Segment Numbers 1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, and 1017E

TMDL Updates to the Water Quality Management Plan (WQMP): Buffalo and Whiteoak Bayous and Tributaries (Segments 1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, and 1017E)

The document *Eighteen Total Maximum Daily Loads for Bacteria in Buffalo and Whiteoak Bayous and Tributaries For Segment Numbers 1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, and 1017E* was adopted by the TCEQ on 04/08/09 and approved by EPA on 06/11/09, and became an update to the state's WQMP. Twenty-two subsequent WQMP updates prior to this one have updated the list of individual wasteload allocations (WLAs) found in the original TMDL document. Additionally, two addenda to the original TMDL were submitted through the April 2013 and April 2015 WQMP updates. These addenda added two 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:

- update the WLA for one facility that has increased its permitted discharge,
- add two new permits, and
- remove one canceled permit and one withdrawn permit.

The change reflected in this update resulted in the shifting of allocations between the sum of the individual WLAs and the allowance for future growth (AFG) in two AUs. This was originally presented in Table 53 in the TMDL document, and the affected AUs are included here as Table 2.

In Table 54 of the 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 54 of the TMDL remains the same.

Table 1 – Change to Individual Wasteload Allocation (Updates Table 45, pp. 99-103 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
15749-001	001	TX0138908	1014A_01	LANDMARK INDUSTRIES	0.75	1.789	New permit
15258-001	001	TX0135437	1014A_01	GRAND PARKWAY 529 LP	NA	NA	Permit canceled
14635-001	001	TX0128082	1014H_02	HARRIS COUNTY MUD 449	0.99	2.361	Increased discharge
15772-001	001	TX0139706	1014H_02	HARRIS COUNTY MUD 465	0.4	0.954	New permit
15539-001	001	TX0137499	1014H_02	MASONSUTTON INVESTMENT LP	NA	NA	Permit withdrawn

Table 2 - *E. coli* TMDL Summary Calculations (Updates Table 53, pp. 116-117 in the TMDL document.)

AU	TMDL (Billion MPN/day)	WLA _{wwTF} (Billion MPN/day)	WLA _{Storm Water} (Billion MPN/day)	LA (Billion MPN/day)	MOS (Billion MPN/day)	Upstream Load (Billion MPN/day)	Future Growth (Billion MPN/day)
1014A_01	195.04	30.18	141.2	15.69	0	0	7.97
1014H_02	175.43	39.43	121.9	13.55	0	0	0.55

Appendix II. One Total Maximum Daily Load for Bacteria in in Gilleland Creek: Segment 1428C

TMDL Updates to the Water Quality Management Plan (WQMP): Gilleland Creek (Segment 1428C)

The document *One Total Maximum Daily Load for Bacteria in Gilleland Creek: Segment 1428C* was adopted by the TCEQ on 8/08/07 and approved by EPA on 04/21/09, and became an update to the state's WQMP. Four subsequent WQMP updates prior to this one have provided and updated the list of individual wasteload allocations (WLAs) for the original TMDL project.

The purpose of this update is to make the following changes (both given in Table 1) to the TMDL:

- update the WLA for one facility that has increased its permitted discharge, and
- remove a canceled permit.

Table 1 - Permitted Bacteria Allocations (Table 6, p. 16 in original TMDL document)

State Permit Number	Outfall	EPA Permit Number	Segment Number	Permittee Name	Flow (MGD)	Waste Load Allocation (WLA) – <i>E. coli</i> cfu/day	TMDL/ Comments
11845-002	001	TX0094927	1428C	CITY OF PFLUGERVILLE	10.0	4.54×10^{10}	Increase discharge
13318-001	001	TX0101532	1428C	CITY OF AUSTIN	NA	NA	Permit canceled

In addition, the changes reflected in this update resulted in a change to the overall WLA for wastewater treatment facilities for the TMDL as is reflected on page 16 of the TMDL. The new WLA is 7.49×10^{10} cfu *E. coli* per day.

The change reflected in this update resulted in the shifting of allocations between the sum of the individual WLAs and the Load Allocation (LA) terms in the TMDL equations on page 17 of the TMDL (and later updated through a WQMP update in April 2009 to provide separate terms for the total WLA for wastewater treatment facilities and regulated stormwater). These equations are included here as Table 2. The overall TMDL values remain the same.

Table 2 - *E. coli* TMDL Summary Calculations (in cfu/day) for Gilleland Creek (updates page 17 in the TMDL document)

Flow Range	TMDL	WLA _{WWTF}	WLA _{SW}	LA
High Flow (0-10% Regime)	2.61×10^{13}	7.49×10^{10}	1.52×10^{13}	1.08×10^{13}
Moderate Flow (11-50% Regime)	1.37×10^{13}	7.49×10^{10}	7.94×10^{12}	5.68×10^{12}

Appendix III. 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

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-six 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:

- add three new permits,
- replace an expired permit with a new permit, and
- remove a canceled 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 four AUs. This was originally presented in Table 18 in the original TMDL document, and the four affected AUs are included here as Table 2.

For AU 1009_01, the existing future growth allocation was insufficient to cover the increased flow to the AU for this update. However, ample loading is available in the WLA_{StormWater} and load allocation (LA) terms. Loading was taken from each of those terms (in a way that maintains the proportions for them as updated in the July 2016 WQMP update) and allotted to future growth. This results in no changes to the overall TMDL allocation.

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. Because loading was moved from the WLA_{StormWater} and LA terms to be used for future growth for AU 1009_01, that AU is updated in Table 3. These overall numbers for the other AUs did not change, and again this results in no changes to the overall TMDL allocations.

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
15745-001	001	TX0138878	1009_01	GOLDEN SHAMROCK REALTY, INC.	0.99	2.361	New permit
15746-001	001	TX0138886	1009_04	HUMBLE JOINT VENTURE 1, LLC	0.3	0.715	New permit
15765-001	001	TX0139017	1009_04	MCNABB UTILITIES, LLC	0.085	0.203	New permit
13027-001	001	TX0096865	1009_04	HARRIS COUNTY	NA	NA	Permit canceled
13690-002	001	TX0138932	1010_04	CONROE ISD	0.1	0.238	New permit; replaces expired permit 13690-001 /TX0111473 with same flow

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

AU	Sampling Location	Stream Name	TMDL (Billion MPN /day)	WLA _{WWTF} (Billion MPN /day)	WLA _{StormWater} (Billion MPN /day)	LA (Billion MPN /day)	MOS (Billion MPN /day)	Future Growth (Billion MPN /day)
1009_01	11333	Cypress Creek	227	19.48	82.16	113.46	11.4	0.5
1009_02	11331	Cypress Creek	615	100.78	196	270	30.8	17.42
1009_03	11328	Cypress Creek	1340	186.23	415	574	67.0	97.77
1009_04	11324	Cypress Creek	1550	225.05	469	648	77.4	130.55

Table 3 – *E. coli* TMDL Final Calculations for Lake Houston Assessment Units (Updates Table 19, pp. 62 in the TMDL document.)

Assessment Unit	TMDL (Billion MPN/day)	WLA _{WWTF} (Billion MPN/day)	WLA _{StormWater} (Billion MPN/day)	LA (Billion MPN/day)	MOS (Billion MPN/day)
1009_01	227	19.98	82.16	113.46	11.4

Appendix IV. One Total Maximum Daily Load for Bacteria in Upper Oyster Creek for Segment Number 1245

TMDL Updates to the Water Quality Management Plan (WQMP): Bacteria in Upper Oyster Creek (Segment 1245)

The document *One Total Maximum Daily Load for Bacteria in Upper Oyster Creek for Segment Number 1245* was adopted by the TCEQ on 08/08/07 and approved by EPA on 09/28/07, and became an update to the state's Water Quality Management Plan (WQMP). Thirteen subsequent WQMP updates prior to this one have provided individual wasteload allocations (WLAs) for permitted facilities.

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

- replace an expired permit with a new permit.

Table 1 –Permitted Bacteria Allocation for Amended Discharges (pp. 35-37 in original TMDL document)

State Permit Number	Outfall	EPA Permit Number	Segment Number	Permittee Name	Flow (MGD)	Waste Load Allocation (WLA)	TMDL/ Comments
15274-002	001	TX0139068	1245	AMDT, LLC	0.02	2.98 x 10 ⁸ cfu <i>E. coli</i> per day	New permit; replaces expired permit 15274-001/ TX0135534 with same flow

This update only involved the permit number and did not affect its discharge amount or permit limits. Therefore, there are no changes to the TMDL equation for the affected reach of this segment.

Appendix V. Two Total Maximum Daily Loads for Dissolved Oxygen in Upper Oyster Creek: Segment Number 1245

TMDL Updates to the Water Quality Management Plan (WQMP): Dissolved Oxygen in Upper Oyster Creek (Segment 1245)

The document *Two Total Maximum Daily Loads for Dissolved Oxygen in Upper Oyster Creek: Segment 1245* was adopted by the TCEQ on 07/28/10 and approved by EPA on 09/21/10, and became an update to the state’s Water Quality Management Plan (WQMP). It has had eight subsequent WQMP updates prior to this one.

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

- replace an expired permit with a new permit.

Table 1 –WLA for Upper Reach 1245_03 by Individual WWTF (Table 9, p. 29 in original TMDL document)

Facility	TCEQ Permit No. EPA Permit No. Outfall No.	Final Permitted Discharge (MGD)	Allowable CBOD5 Loading (kg/d) (lb/d)	Allowable NH3-N Loading (kg/d) (lb/d)	Comments
AMDT, LLC	WQ0015274-002 TX0139068 Outfall 001	0.02	0.76 1.67	0.23 0.50	New permit; replaces expired permit 15274-001/ TX0135534 with same flow

This update only involved the permit number and did not affect its discharge amount or permit limits. Therefore, there are no changes to the TMDL equation for the affected assessment unit of this segment.