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DRAFT

July 2013 Update to the Texas Water Quality Management Plan

Prepared by the:
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

July 2013 Update to the Texas Water Quality Management Plan

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

< 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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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 on behalf of the Governor of Texas, 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 2013 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

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, and 04/2013.

The Projected Effluent Limit Update section provides information compiled from May 1, 2013 through July 31, 2013, 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 Agencies 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 waste load 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
10539-001	1113	TX0022543	Clear Lake City Water Authority Harris	10.0	5	417.00	2	166.80			4	Outfall 001
			* Outfalls combined discharge is not to exceed 10 MGD	1.08	5	45.04	2	18.01			4	Outfall 002 AKA 2A
				1.08	5	45.04	2	18.01			4	Outfall 003 AKA 2B
10681-003	2304	TX0085316	City of Laredo Webb	18.0					20	3002.40	2	
12822-001	1102	TX0094226	Aqua Utilities, Inc. Brazoria	0.035			2	0.58	5	1.46	4	
13746-001	2105	TX0071056	City of Asherton Dimmit	0.20					20	33.36	2	
13866-001	1244	TX0118265	SWWC Utilities, Inc. Williamson	0.99	10	82.57	2	16.51			6	
14919-001	2491	TX0057614	City of Edcouch Hidalgo	0.70	10	58.38	3	17.51			3	
15082-001	1012	TX0134414	Chaney Investments, Ltd. Montgomery	0.30	10	25.02	3	7.51			5	
15085-001	1016	TX0134457	R & A Harris South, L.P. Harris	0.006	10	0.50	3	0.15			4	MOA
15088-001	1108	TX0134511	Brazoria County MUD No. 61 Brazoria	0.55	10	45.87	3	13.76			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.
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
Agua SUD	Agua SUD Eastern Service Area	T/C	2008	Nueces-Rio Grande Coastal / LRGVDC	2202	Hidalgo	5/7/2013	Extending collection & treatment system for area served by septic systems.	2010	39,231
									2020	54,984
									2030	68,699
Aqua WSC	Stony Point Subdivision	C	2013	Colorado River	1434	Bastrop	5/7/2013	Extending collection service to additional residential customers.	2010	37,503
									2020	54,835
									2030	66,989
									2040	88,380
City of Comanche	City of Comanche	T/C	2013	Brazos River	1221	Comanche	5/7/2013	Replace existing clarifiers and aeration equipment at wastewater treatment facility.	2010	4,336
									2020	4,704
									2030	4,749
									2040	4,734
City of Ingram	City of Ingram	C	2013	Guadalupe River	1806	Kerr	4/25/2013	Extending collection service to non-residential customers.	2010	1,963
									2020	2,188
									2030	2,295
									2040	2,219
City of McAllen	City of McAllen Southside	T/C	2013	Nueces-Rio Grande Coastal / LRGVDC	2202	Hidalgo	5/16/2013	Replace existing clarifiers, aeration basins, digesters, headworks at wastewater facility.	2013	71,309
									2018	73,661
									2025	78,258
									2032	83,258
City of Rio Grande City	City of Rio Grande City	T/C	2013	Rio Grande	2302	Starr	6/5/2013	Improvements to the wastewater infrastructure.	2010	13,834
									2020	15,679
									2030	17,354
									2040	19,056
City of San Antonio	San Antonio Water System (SAWS)	T/C	2013	San Antonio River	1903	Bexar	7/26/2013	Extensive rehabilitation and reconstruction of the sanitary sewer collection system to prevent overflows.	2010	1,701,101
									2020	1,944,704
									2030	2,165,160
									2040	2,346,774
City of Wimberley	City of Wimberley	T/C	2020	Guadalupe River	1813	Hays	5/20/2013	Expand treatment plant, construct collection and reclaimed water distribution system.	2010	90
									2020	135
									2030	135
									2040	135
San Antonio River Authority (SARA)	San Antonio River Authority	T/C	2012	San Antonio River	1902	Bexar	7/9/2013	Construction of Stormwater BMP's on all San Antonio facilities.	2010	1,714,773
									2020	1,974,041
									2030	2,231,550
									2040	2,468,254

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 Updates

Planning Agency	Service Area	DMA Needs	DMA Date	DMA Area/Comments
City of Comanche	City Limits/ETJ	T/C	3/11/2013	
City of San Antonio	San Antonio Water System	T/C	3/21/2013	
City of San Juan	City of San Juan	T/C	2/6/2013	
City of Wimberley	City of Wimberley	T/C	10/23/2012	
San Antonio River Authority	San Antonio River Authority	T/C	3/20/2013	

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 waste load 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 appendixes may reflect proposed waste load 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. And note that for bacteria TMDLs, loads may be expressed in counts for 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. Eight Total Maximum Daily Loads for Indicator Bacteria in Greens Bayou Above Tidal and Tributaries (Segments 1016, 1016A, 1016B, 1016C, and 1016D)

TMDL Updates to the WQMP: Eight Total Maximum Daily Loads for Indicator Bacteria in Greens Bayou Above Tidal and Tributaries (Segments 1016, 1016A, 1016B, 1016C, and 1016D)

The document *Eight Total Maximum Daily Loads for Indicator Bacteria in Greens Bayou Above Tidal and Tributaries: Segments 1016, 1016A, 1016B, 1016C, and 1016D* was adopted by the TCEQ on 6/2/2010 and approved by EPA on 08/12/2010, and became an update to the state's Water Quality Management Plan (WQMP). It has had three subsequent WQMP updates prior to this one that provided individual Waste Load Allocations (WLAs) for permitted facilities.

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,
- remove four permits that expired and one that was withdrawn, 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 (AFG) in four assessment units (AUs). This was originally presented in Table 17 in the TMDL document, and the four affected AUs are included here as Table 2.

In Table 18 of the TMDL, 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 18 of the TMDL remains the same.

Table 1 – Changes to Individual Waste Load Allocations (Updates Table 15, pp. 39-42 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
15085-001	001	TX0134457	1016_01	R&A HARRIS SOUTH LP	No change	No change	New permit (Replaces 04853-000; TX0088897)
14608-001	001	TX0127825	1016_03	GREENS BAYOU ASSEMBLY OF GOD	N/A	N/A	Permit expired
14633-001	001	TX0128066	1016_03	SOUTH CENTRAL WATER COMPANY	N/A	N/A	Permit expired
14307-001	001	TX0124508	1016C_01	METAL BUILDING COMPONENTS LP	N/A	N/A	Permit expired
14066-001	001	TX0033430	1016D_01	HOUSTON AIRPORT HOSPITALITY LP	N/A	N/A	Permit expired
13561-001	001	TX0107301	1016A_03	HARRIS COUNTY	N/A	N/A	Permit withdrawn
14874-001	001	TX0067539	1016_03	BC HUMBLE ENTERPRISES LLC	No change	No change	Name changed

Table 2 - *E. coli* TMDL Summary Calculations for Greens Bayou Assessment Units (Updates Table 17, pp. 46 in the TMDL document)

Assessment Unit	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)
1016_03	11369	Greens Bayou Above Tidal	1,780	197	1,050	231	89.0	213
1016A_03	11125	Garners Bayou	419	57.4	214	31.0	21.0	95.6
1016C_01	11124	Unnamed Tributary of Greens Bayou	94.1	0.98	88.2	0	4.70	0.22
1016D_01	16676	Unnamed Tributary of Greens Bayou	79.7	13.0	35.8	6.51	3.99	20.4

Appendix II. One Total Maximum Daily Load for Bacteria in the Lower San Antonio River (Segment 1901)

TMDL Updates to the WQMP: One Total Maximum Daily Load for Bacteria in the Lower San Antonio River (Segment 1901)

The document *One Total Maximum Daily Load for Bacteria in the Lower San Antonio River: For Segment 1901* was adopted by the TCEQ on 8/20/2008 and approved by EPA on 10/10/08, and became an update to the state's Water Quality Management Plan (WQMP). It has had two subsequent WQMP updates prior to this one.

The purpose of this WQMP update is to make the following change to the TMDL:

- Provide the individual WLA for a new permit (Table 1).

Table 1 - Permitted Bacteria Allocations (p. 28 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> 10 ⁹ cfu/day	Comments
15079-001	001	TX0134350	1901	South Central Water Company	0.0125	0.06	New Permit

There is a small change to the TMDL equation for the affected station (Table 2). As stated in the TMDL in the Future Growth section on page 29: “Future growth for existing and new point sources is not limited by this TMDL as long as their activities do not cause bacteria to exceed the water quality standard for contact recreation. The assimilative capacity of the stream will increase as the amount of flow in the stream increases. Increases in flow will allow for increased loadings.”

Table 2 - TMDL Allocation Summary for Station 12794 (*E. coli* 10⁹ cfu/day)
(Updates Table 16 in original TMDL document)

	Flow Regime (percentile)				
	0-10	10-40	40-60	60-90	90-100
Wasteload Allocation (WLA)	0.36	0.36	0.36	0.36	0.36
Load Allocation (LA)	9,334.1	2,439.9	1,364.6	878.7	495.6
Margin of Safety (MOS)	491.3	128.4	71.8	46.3	26.1
TMDL (WLA+LA+MOS)	9,826	2,569	1,437	925	522