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July 2012 Update to the Texas Water Quality Management Plan

Prepared by the:
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

July 2012 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/waterquality/assessment/WQmanagement_updates.html* >

Developed in accordance with Sections 205(j)
and 208 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 updates[2], 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 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 2012 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

The Projected Effluent Limit Update section provides information compiled from

[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 and 04/2012.

May 1, 2012 through July 31, 2012, 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, $CBOD_5$ – 5 Day Carbonaceous Biochemical Oxygen Demand, NH_3-N – Ammonia-Nitrogen, BOD_5 – 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 effective at the time of the TCEQ production of this update. Water Quality Standards 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
10403-002	1803	0024244	City of Cuero DeWitt	2.0					20	333.60	5	
13948-001	0404	0099236	Northeast Texas Community College Titus	0.03					20	5.00	2	
14628-001	0805	0032212	D-Bar-B Water-Wastewater Supply Corp. Dallas	0.024	10	2.00	3	0.60			4	
15010-001	0807	0133116	Abraxas Corp. Parker	0.020					20	3.34	2	
15044-001	1009	0133639	Community of Faith Harris	0.014	10	1.17	3	0.35			6	
15046-001	2311	0133663	South Central Water Co. Reeves	0.30					10	25.02	4	
15049-001	2105	0133698	South Central Water Co. Dimmit	0.30	10	25.02	3	7.51			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
City of Brady	Brady City Limits and ETJ	T/C	2011	Colorado River Basin	1416	McCulloch	07/03/2012	Planning and design of two new treatment plants and collection system	2010	5,605
									2020	5,775
									2030	5,950
									2040	6,150
City of Del Rio	Del Rio City Limits and ETJ	T/C	2011	Rio Grande Basin	2313	Val Verde	06/04/2012	Rehabilitation of collection system	2010	37,024
									2020	40,050
									2030	42,869
									2040	45,270
City of Mount Vernon	Mt. Vernon City Limits	T/C	2011	Sulphur River Basin	0303	Franklin	06/01/2012	Rehabilitation of collection system and lift station	2010	2,788
									2020	3,230
									2030	3,532
									2040	3,834
Kerr County (Center Point)	Center Point wastewater service area	T/C	2011	Guadalupe River Basin	1806	Kerr	05/30/2012	Planning, design, and acquisition of new collection system for Center Point	2010	2,115
									2020	2,357
									2030	2,486
									2040	2,519

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 Brady	City Limits/ETJ	T/C	11/24/2008	
City of Del Rio	City Limits/ETJ	T/C	01/24/2012	
City of Mt. Vernon	City Limits	T/C	04/02/2012	
Kerr County (Center Point)	Center Point Service Area	T?C	11/14/2012	

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 U.S. Environmental Protection Agency 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.

<u>Appendix I.</u> 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 04/08/2009 and approved by EPA on 06/11/09, and became an update to the state's Water Quality Management Plan (WQMP). Four subsequent WQMP updates prior to this one have provided individual Waste Load Allocations (WLAs) for permitted facilities.

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

- remove seven expired permits;
- replace two of the expired permits with new permits.

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Table 1 – Change to Individual Waste Load 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) - *E. coli* in Billion MPN/day	TMDL Comments
13484-001	001	TX0104311	1014_01	529 #35, LTD	N/A	N/A	Permit expired
14905-001	001	TX0131601	1014E_02	FRY ROAD VENTURE LP	N/A	N/A	Permit expired
14905-002	001	TX0131610	1014E_02	FRY ROAD VENTURE LP	N/A	N/A	Permit expired
12516-001	001	TX0089907	1014H_01	WEST HOUSTON AIRPORT	N/A	N/A	Permit expired
13509-001	001	TX0092746	1017_01	TRINITY @ WINDFERN, LLC	N/A	N/A	Permit expired
15040-001	001	TX0133582	1017_01	TRINITY @ WINDFERN, LLC	0.04	0.095	Replaces expired permit 13509-001
14316-001	001	TX0123650	1017_01	NCI BUILDING SYSTEMS LP	N/A	N/A	Permit expired
14873-001	001	TX0082597	1017_01	MCDONALDS CORP.	N/A	N/A	Permit expired
15036-001	001	TX0133493	1017-01	MCDONALDS CORP.	0.003	0.007	Replaces expired permit 14873-001

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 53 in the TMDL document, and the affected AUs are included here as Table 2.

Table 2 - *E. coli* TMDL Summary Calculation (Updates Table 53, pp. 118-119 in the TMDL document.)

Assess-ment Unit	**TMDL (Billion MPN/day)**	**WLA_{WWTF} (Billion MPN/day)**	**$WLA_{StormWater}$ (Billion MPN/day)**	**LA (Billion MPN/day)**	**MOS (Billion MPN/day)**	**Upstream Load (Billion MPN/day)**	**Future Growth (Billion MPN/day)**
1014_01	1841.94	101.4	837.68	13.08	0	856.98	32.80
1014E_02	236.83	68.68	145	7.78	0	0	15.37
1014H_01	39.18	1.91	33.12	3.68	0	0	0.47
1017_01	173.57	74.61	58.94	6.55	0	0	33.47

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 assessment unit. Therefore, these overall numbers did not change, and Table 54 of the TMDL remains the same.

Appendix II. 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 Water Quality Management Plan (WQMP). Three subsequent WQMP updates prior to this one have provided individual Waste Load Allocations (WLAs) for permitted facilities.

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

- include a new permit,
- remove an expired permit, and
- update the names of two facilities.

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 six assessment units (AUs). This was originally presented in Table 18 in the TMDL document, and the six affected AUs are included here as Table 2.

In Table 19 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 19 of the TMDL remains the same.

Table 1 – Changes to Individual Waste Load 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) – *E. coli* in Billion MPN/day	TMDL Comments
15044-001	001	TX0133639	1009_01	COMMUNITY OF FAITH	0.014	0.03	New permit
13614-001	001	TX0108553	1008_03	RICHFIELD INVESTMENT CORP	N/A	N/A	Permit expired
14610-001	001	TX0127850	1008H_01	SOUTH CENTRAL WATER COMPANY	N/A	N/A	Name changed
14870-001	001	TX0128660	1009_04	HARRIS COUNTY MUD 454	N/A	N/A	Name changed

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_{WWTF} (Billion MPN/day)	$WLA_{StormWater}$ (Billion MPN/day)	LA (Billion MPN/day)	MOS (Billion MPN/day)	Future Growth (Billion MPN/day)
1008_03	11313	Spring Creek	1420	91.4	141	1050	70.9	64.3
1008_04	11312	Spring Creek	1510	122	146	1090	75.7	82.4
1009_01	11333	Cypress Creek	227	14.3	59.9	138	11.4	3.05
1009_02	11331	Cypress Creek	615	71.8	141	325	30.8	46.7
1009_03	11328	Cypress Creek	1340	157	299	690	67.0	126
1009_04	11324	Cypress Creek	1550	194	338	779	77.4	160

Appendix III. One Total Maximum Daily Load for Zinc in Nueces Bay for Segment Number 2482

TMDL Updates to the Water Quality Management Plan (WQMP): Nueces Bay (Segment 2482)

The document *One Total Maximum Daily Load for Zinc in Nueces Bay for Segment Number 2482* was adopted by the TCEQ on 11/01/2006 and approved by EPA on 12/15/06, and became an update to the state's Water Quality Management Plan (WQMP). One subsequent WQMP update prior to this one provided individual Waste Load Allocations (WLAs) for permitted facilities.

The purpose of this update is to make the following change to the TMDL (Table 1):

- Provide an updated allocation for one permit.

Table 1 – Change to Individual Waste Load Allocation (Updates Table 3, pp. 14 in the TMDL document, which was modified in a previous WQMP update.)

State Permit Number	Outfall	EPA Permit Number	Segment Number	Permittee Name	Flow (MGD)	Waste Load Allocation (WLA) – Zinc kg/day	TMDL Comments
01244-000	001	TX0003581	2482	NUECES BAY POWER STATION	500	27.91	Update to WLA

The TMDL equation needs no adjustment, as the overall allocations by category remain the same. Excess capacity built into the total WLA for the TMDL was used in the updated allocation for the affected permit.