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FINAL

January 2009 Update to the Texas Water Quality Management Plan



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Compiled and distributed by the
Water Quality Assessment Section
Water Quality Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC-150
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Developed in accordance with Section 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 total maximum daily loads (TMDLs), effluent limitations of wastewater facilities, 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 Environmental Protection Agency (EPA).

The January 2009 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. Total Maximum Daily Load Updates

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

²Fiscal Years 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, and 10/2008.

The Projected Effluent Limit Updates section provides information compiled from November 1, 2008 through January 31, 2009, 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 section on the Service Area Population for municipal wastewater facilities have 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) Updates section provides information on proposed waste load allocations for new dischargers and revisions to existing TMDLs.

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.

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 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
10066-002	1908	0131831	City of Boerne Kendall	1.4	5	62.55	2	25.02			6	
10681-003	2304	0085316	City of Laredo Webb	12					20	2,001.60	2	
10681-007	2304	0131776	City of Laredo Webb	0.0719					20	11.99	2	
11193-001	1017	0075434	Aqua Utilities, Inc. Harris	0.96	10	80.06	3	25.00			4	Apr. - Oct.
				0.96	10	80.06	5	40.03			4	Nov. - Mar.
11312-001	0826	0022501	City of Justin Denton	0.80	7	46.70	2	13.34			6	Apr. - Oct.
				0.80	10	66.72	5	33.36			5	Nov. - Mar.
13536-001	1203	0106224	Special Camps for Special Kids Bosque	0.0275	10	2.29	3	0.69			4	
14833-001	1428	0129844	Aqua Water Supply Corp. Bastrop	0.25	5	10.43	2	4.17			4	
14909-001	1008	0131652	AUC Group. L.P. Montgomery	0.05	10	4.17	3	1.25			4	
14916-001	1401	0131709	J. West Development, Inc. Matagorda	0.075					20	12.51	4	
14917-001	1245	0131717	Fort Bend County MUD No. 134 Fort Bend	0.95	5	39.62	2	15.85			6	
14918-001	1008	0131725	Eagle Star Investments, L.L.P. Montgomery	0.10	10	8.34	3	2.50			4	

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
14922-001	1003	0131733	Southern Horizons, L.P. Montgomery	0.120	10	10.01	2	2.00			4	
14924-001	1009	0131741	South Central Water Co. Harris	0.32	10	26.69	3	8.01			4	
14926-001	1011	0131636	City of Patton Village Montgomery	0.35	10	29.19	3	8.76			4	
14928-001	0801	0129356	Carter-CC, Ltd. Chambers	0.25	10	20.85	3	6.26			4	
14934-001	0702	0131873	Federal Emergency Management Agency Chambers	0.03375					20	5.63	2	

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 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 to the Water Quality Management Plan

Planning Agency	Service Area	Needs	Needs Year	Basin Name	Segment	County	WQMP Date	Comments	Year	Population
City of Fort Worth	City of Fort Worth	T/C	1989	Trinity River Basin/NCTCOG	0841	Tarrant	11/12/2008	Rehabilitate and replace sewer and collection lines.	2000	534,694
									2010	781,850
									2020	1,080,269
									2030	1,252,328
Harris County WCID No. 89	Harris County WCID No. 89	C	2007	San Jacinto-Brazos River Basin/H-GAC	1102	Harris	11/26/2008	Build new wastewater treatment plant.	2005	3,444
									2010	12,810
									2020	12,810
Harris County WCID No. 36	Harris County WCID No. 36	C	2008	San Jacinto-Brazos River Basin/H-GAC	1006	Harris	01/20/2009	Replace and expand wastewater collection system.	2005	9,427
									2010	9,895
									2020	12,603
									2030	15,671
City of Houston	City of Houston	T/C	2006	San Jacinto-Brazos River Basin/H-GAC	Various	Harris	01/22/2008	Rehabilitate and replace various neighborhood collection systems. (SRF#72032)	2005	1,954,848
									2010	2,240,974
									2020	2,520,926
									2030	2,798,278

Planning Agency	Service Area	Needs	Needs Year	Basin Name	Segment	County	WQMP Date	Comments	Year	Population
City of Houston	City of Houston	T/C	2008	San Jacinto-Brazos River Basin/H-GAC	Various	Harris	01/21/2009	Rehabilitate and replace various neighborhood collection systems. (SRF#72229)	2005	1,954,848
									2010	2,240,974
									2020	2,520,926
									2030	2,798,278
City of Jarrell	City of Jarrell	T/C	2006	Colorado River Basin	1213	Williamson	11/12/2008	Build a new wastewater collection system and wastewater treatment plant.	2005	1,800
									2010	2,533
									2020	4,572
									2030	6,119
City of Littlefield	City of Littlefield	T/C	2008	Brazos River Basin	1241	Lamb	12/18/2008	Replace and expand wastewater collection system.	2005	6,507
									2010	6,864
									2020	7,299
									2030	7,678
San Antonio Water System	City of San Antonio	T/C	2005	San Antonio River Basin	1903	Bexar	12/10/2008	Replace and expand wastewater collection system.	2000	1,392,931
									2010	1,631,935
									2020	1,857,745
									2030	2,591,121
City of Sugar Land	City of Sugar Land	T/C	2007	San Jacinto-Brazos River Basin/H-GAC	1202	Fort Bend	01/22/2009	Expand West wastewater treatment plant.	2005	25,005
									2010	27,622
									2020	64,414

Total Maximum Daily Load Updates

The Total Maximum Daily Load (TMDL) Program works to improve water quality in impaired or threatened water 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.

Table 3 reflects 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.

Table 3. Total Maximum Daily Load Updates

State Permit Number	Segment Number	Permittee Name	Flow (MGD)	Constituents	Waste Load Allocation (WLA)	TMDL/Comments
00348-000	0404	Lone Star Steel Co., L.P.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
01331-000	0403	Southwestern Electric Power Co.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
01464-000	0404	Southwestern Electric Power Co.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
01811-000	0404	Southwestern Electric Power Co.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
02697-000	0404	TXU Mining Co., L.P.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
03017-000	0404	Pilgrim's Pride Corp.	3.00	Total Phosphorus	24,000 kg/yr 65.71 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
04059-000	0404	US Steel Tubular Products Inc.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
10239-001	0404	City of Omaha	0.20	Total Phosphorus	100 kg/yr 0.27 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
10250-001	0404	City of Pittsburg (Sparks Branch)	2.00	Total Phosphorus	800 kg/yr 2.19 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
10250-002	0404	City of Pittsburg (Dry Creek)	0.20	Total Phosphorus	300 kg/yr 0.82 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
10499-001	0404	City of Daingerfield	0.70	Total Phosphorus	200 kg/yr 0.55 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
10575-004	0404	City of Mount Pleasant	2.91	Total Phosphorus	1,000 kg/yr 2.74 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.

State Permit Number	Segment Number	Permittee Name	Flow (MGD)	Constituents	Waste Load Allocation (WLA)	TMDL/Comments
12563-001	0403	Aqua Utilities Inc.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
13821-001	0404	Chapel Hill I.S.D.	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
13948-001	0404	Northeast Texas Community College	N/A	Total Phosphorus	N/A	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
14365-001	0403	City of Lone Star	0.44	Total Phosphorus	200 kg/yr 0.55 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
14389-001	0403	City of Ore City	0.22	Total Phosphorus	400 kg/yr 1.10 kg/day	Phosphorus in the Lake O' the Pines TMDL. Updates pages 25-26.
14689-001	2110	City of Sabinal	0.34	Total Nitrogen	56.7 lb/day	Nitrate-Nitrogen in Lower Sabinal River. Updates page 8.
14802-001	2204	LCS Corrections Services, Inc.	0.15	Chloride	1,784 lb/day	Three Total Maximum Daily Loads for Chloride, Sulfate, and Total Dissolved Solids in Petronilia Creek Above Tidal. Updates page 28.
				Sulfate	595 lb/day	
				TDS	4,757 lb/day	
14917-001	1245	Fort Bend County MUD No. 134	0.95	Bacteria	1.4 x 10 ¹⁰ cfu <i>E. coli</i> per day	Bacteria in Upper Oyster Creek. Updates pages 35-37.