DRAFT
TMDLs for Total Dissolved Solids for Selected Subsegments in the Lake Pontchartrain Basin, Louisiana

(040501 and 040504)

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EXECUTIVE SUMMARY

Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's (EPA's) Water Quality Planning and Management Regulations (at Title 40 of CFR [*Code of Federal Regulations*] section 130.7) apply to waterbody-pollutant pairs on the approved 303(d) impaired waters list, even if pollutant sources have implemented technology-based controls. A total maximum daily load (TMDL) is a calculation of the maximum amount of a pollutant that a waterbody can assimilate while still meeting the water quality standard for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and nonpoint sources to restore and maintain the quality of the state's water resources (USEPA 1991).

A TMDL for a given pollutant and waterbody is composed of the sum of individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources, and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody, and it may include a future growth (FG) component. The components of the TMDL calculation are illustrated using the following equation:

$$TMDL = \sum WLAs + \sum LAs + MOS + FG$$

The area for this TMDL includes subsegments 040501 and 040504 in the Lake Pontchartrain Basin in southeastern Louisiana. Subsegment 040501 is in St. Helena and Livingston parishes and incorporates the Tickfaw River from the northern Mississippi/Louisiana border to Louisiana Highway 42. This subsegment has an area of 324.5 square miles that is predominantly covered by forests (33 percent), wetlands (29 percent), and grass/shrubs (23 percent). Subsegment 040504 is in the Tangipahoa Parish near Hammond City and includes the Yellow Water River from its headwaters to where it drains into Ponchatoula Creek. Subsegment 040504 has an area of 17.25 square miles and is mainly urban development land (43 percent), followed by wetlands (21 percent), forest (13 percent), and pasture/hay (11 percent).

The Louisiana Department of Environmental Quality (LDEQ) has included subsegments 040501 and 040504 on the state's 2010 section 303(d) list of impaired waterbodies (*Draft 2010 Integrated Report*) (LDEQ 2010a) and there designated uses (Table ES-1). Subsegment 040501 is listed for mercury and total dissolved solids (TDS) impairments. The impaired designated use is fish and wildlife propagation (FWP). Subsegment 040504 is listed for chloride, fecal coliform bacteria, dissolved oxygen, and TDS. The impaired designated uses are primary contact recreation (PCR), secondary contact recreation (SCR), and FWP.

Table ES-1. The subsegment and impairments addressed in this report

Subsegment number	Subsegment name	Designated use		
		Primary contact recreation	Secondary contact recreation	Fish and wildlife propagation
040501	Tickfaw River	Fully supporting	Fully supporting	Not supporting
040504	Yellow Water River	Not supporting	Not supporting	Not supporting

Source: LDEQ 2010a

TMDLs for TDS were calculated using a load reduction approach. Subsegments 040501 and 040504 contain wetlands, where streamflow is a negligible component of hydrology or is influenced by tidal action. Using the load reduction approach, the water quality criteria and the average water yield were multiplied by the calculated drainage area of each subsegment to estimate the total allowable load.

In developing the TMDL, allowable loadings from all pollutant sources that cumulatively amount to no more than the TMDL must be established and thereby provide the basis for establishing water quality-based controls. WLAs were given to permitted point source discharges, including regulated stormwater and municipal separate storm sewer systems (MS4s). The LAs include background loadings, as well as human-induced nonpoint sources. An explicit MOS of 10 percent and a FG component of 10 percent were also included.

This TMDL establishes load limitations for TDS. The numeric TDS water quality criteria that apply to the impaired subsegments and that were used to calculate the total allowable loads are presented in Table ES-2. Table ES-3 presents summaries of the TMDLs for the subsegments addressed in this report.

Table ES-2. Numeric water quality criteria for the listed subsegments in this TMDL

Subsegment	Subsegment name	TDS (mg/L)
040501	Tickfaw River	55
040504	Yellow Water River	150

Source: LDEQ 2011b

Table ES-3. Summary of TDS TMDLs, WLAs, LAs, MOS, and FG

Subsegment	TMDL (lb/d)	WLA (lb/d)	LA (lb/d)	Explicit MOS (lb/d)	FG (lb/d)
040501	255,984.3	266.6	204,574.2	25,571.8	25,571.8
040504	39,961.1	23,248.3	9,298.9	3,706.9	3,706.9

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APPENDICES

Appendix A: Point Source Discharges in Subsegments 040501 and 040504 in the Lake Pontchartrain Basin

Appendix B: TDS Water Quality Data

Appendix C: TDS TMDL Calculation for Subsegments 040501 and 040504 in the Lake Pontchartrain Basin

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1. Introduction

Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's (EPA's) Water Quality Planning and Management Regulations (at Title 40 of CFR [*Code of Federal Regulations*] section 130.7) apply to waterbody-pollutant pairs on the approved 303(d) impaired waters list even if pollutant sources have implemented technology-based controls. A total maximum daily load (TMDL) is a calculation of the maximum allowable load (in mass per unit time) of a pollutant that a waterbody is able to assimilate while still supporting its designated uses. The maximum allowable load is determined on the basis of the relationship between pollutant sources and in-stream water quality. A TMDL provides the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and nonpoint sources to restore and maintain the quality of the state's water resources (USEPA 1991).

The text of 40 CFR 130.7 has been affected by several Federal District Court suits, appeals rulings, and a Supreme Court ruling mandating that a TMDL must be described in terms of mass per day. According to 40 CFR 130.7, if EPA does not approve a TMDL submitted by a state, EPA is responsible for developing a TMDL. In a District Court case regarding the TMDL program in Louisiana (*Sierra Club and Louisiana Environmental Action Network, Inc. v. EPA*, Civil Action Number: 96-0527), EPA was listed as the sole defendant. That case resulted in the April 1, 2002, consent decree approved by the judge. A consent decree is a negotiated set of actions to satisfy the plaintiff. In many situations, the actions are more stringent than the established regulation. For example, most consent decrees require an annual report to the plaintiff summarizing the work done in the year; that is not required by any regulation and will cease when the consent decree is closed.

The 2002 consent decree between EPA and the plaintiffs establishes a fixed set of waterbody-pollutant pairs for which TMDLs are to be established or approved, and it establishes a timeline for each set of TMDLs. Each set is determined to be complete upon establishment or approval of a TMDL for every waterbody-pollutant pair; the set also would be complete if one or more originally specified waterbody-pollutant pairs no longer appear on a subsequently approved 303(d) list, and all other waterbody-pollutant pairs have established/approved TMDLs. The TMDLs in this report are part of that consent decree. Because the original court suit was initiated because of a lack of progress in establishing TMDLs, the date when a TMDL is established or approved is not easy to extend and requires another agreement with the plaintiffs.

In most circumstances, a variety of scientifically acceptable methods can be used for developing a TMDL, wasteload allocation (WLA), and load allocation (LA). For these TMDLs, simple Microsoft Excel-based methods were used according to the resources and data available. It should be noted that appearance of some acceptable TMDL calculation methods as simple does not imply invalid results. Models vary in the amount of necessary resources (e.g. training, setup/computational time, personnel, expense), required input and background data, questions answered, and output capability (e.g., charts, tables, data files). The final result of these TMDLs (and any TMDL) is a plan that is adopted into the Water Quality Management Plan (WQMP) to achieve the TMDL. Stakeholder involvement and additional information, such as monitoring data, might lead to an update of the WQMP and in turn a proposal for a different plan to meet water quality objectives. Such a WQMP update receives the same public participation as the original TMDL and WQMP review and approval.

For the TMDL discussed in this report, monitoring data collected by the Louisiana Department of Environmental Quality (LDEQ) indicate that observed TDS concentrations sometimes do not meet the state's water quality criteria for subsegment 040501 and 040504 in the Lake Pontchartrain Basin. The impaired designated use for subsegment 040501 is fish and wildlife propagation, and for 040504, the impaired designated uses are primary and secondary contact recreation, and fish and wildlife propagation (Table 1-1). The subsegments are listed as not supporting the designated uses in Louisiana's 2010 section 303(d) list (as included in the *Draft 2010 Integrated Report*). Suspected causes of the TDS impairment in subsegment 040501 are *drainage/filling/loss of wetlands.* Suspected causes of the TDS impairment in subsegment 040504 are *drought-related impacts and site clearance (land development or redevelopment)*.

Table 1-1. Section 303(d) listing information for subsegments included in this report

Subsegment number	Subsegment name	Subsegment description	Impaired designated use[a]	Suspected sources of TDS impairment
040501	Tickfaw River	Mississippi state line to LA-42	FWP	Drainage/filling/loss of wetlands
040504	Yellow Water River	Headwaters to Ponchatoula Creek	PCR, SCR, FWP	Drought-related impacts; site clearance (land development or redevelopment)

[a] PCR = primary contact recreation, SCR = secondary contact recreation , and FWP = fish and wildlife protection
Source: LDEQ 2010a

2. Background Information

2.1 General Description

The Lake Pontchartrain Basin is an estuarine system covering approximately 4,700 square miles (mi^2), within which rivers, canals, wetlands, and bayous drain the southeastern portion of Louisiana into a series of connected lakes, and eventually flow into the Gulf of Mexico (USGS 2002). The basin's northern boundary is defined by the Mississippi state line; the Mississippi River levees form the western and southern border of the basin; the Pearl forms the eastern edge; and the Breton and Chandeleur sounds are on the southeastern portion of the Lake Pontchartrain Basin (LDEQ 2010b, LPBF 2009). The three lakes in the watershed, from west to east, are Lakes Maurepas, Pontchartrain, and Borgne. The main rivers contributing fresh water to Lake Marepas are the Amite, Tickfaw, Natalbany, and Comite Rivers. Lake Maurepas and the Tangipahoa, Tchefuncta, and Bogue Falaya Rivers flow into Lake Pontchartrain. The lakes themselves contain brackish water due to mixing with waters from the Gulf (USGS 2002). Portions of several rivers within the selected subsegments of the Lake Pontchartrain Basin are tidally influenced. Land in the northern part of the basin includes forests, pastures, and dairies, whereas the southern section contains large areas of brackish and saline marshes (LDEQ 2010b). Elevations in the basin range from minus 5 feet at New Orleans to greater than 200 feet near the Mississippi River (LDEQ 2010b).

Subsegment 040501 (Tickfaw River from Mississippi state line to LA-42) is in the St. Helena and Livingston Parishes, and encompasses 324.5 mi^2 (840.6 km^2 [square kilometers]). Subsegment 040504 (Yellow Water River from headwaters to Ponchatoula Creek) is in Tangipahoa Parish, and encompasses 17.25 mi^2 (44.68 km^2). Figure 2-1 shows the locations of subsegments 040501 and 040504 within the Lake Pontchartrain Basin. The Yellow Water River is a larger tributary of the Natalbany River. Downstream of subsegment 040501 and 040504, the Natalbany River connects to the Tickfaw River and eventually drains into Lake Marepas.

2.2 Land Use

Land use data were obtained from the 2006 U.S. Geological Survey (USGS) National Land Cover Data set (NLCD) (Table 2-1 and Figure 2-2). The predominant land use in subsegment 040501 is forested land (33.3 percent), followed by wetlands (29.2 percent) and grass/shrub (23.3 percent). Subsegment 040504 is mostly urban development (43.3 percent), as the City of Hammond lies within the subsegment's boundaries. The subsegment also has moderate amounts of wetlands (21.5 percent), forest (12.9 percent) and pasture/hay (11.5 percent).

Table 2-1. Percent land use per subsegment

Land use	040501	040504
Open water	0.1%	0.6%
Developed	5.3%	43.3%
Barren land	0.1%	0.9%
Forest	33.3%	12.9%
Grass/shrub	23.3%	8.4%
Pasture/hay	6.5%	11.5%
Cultivated crops	2.2%	0.8%
Wetlands	29.2%	21.5%
Total	100.00%	100.00%

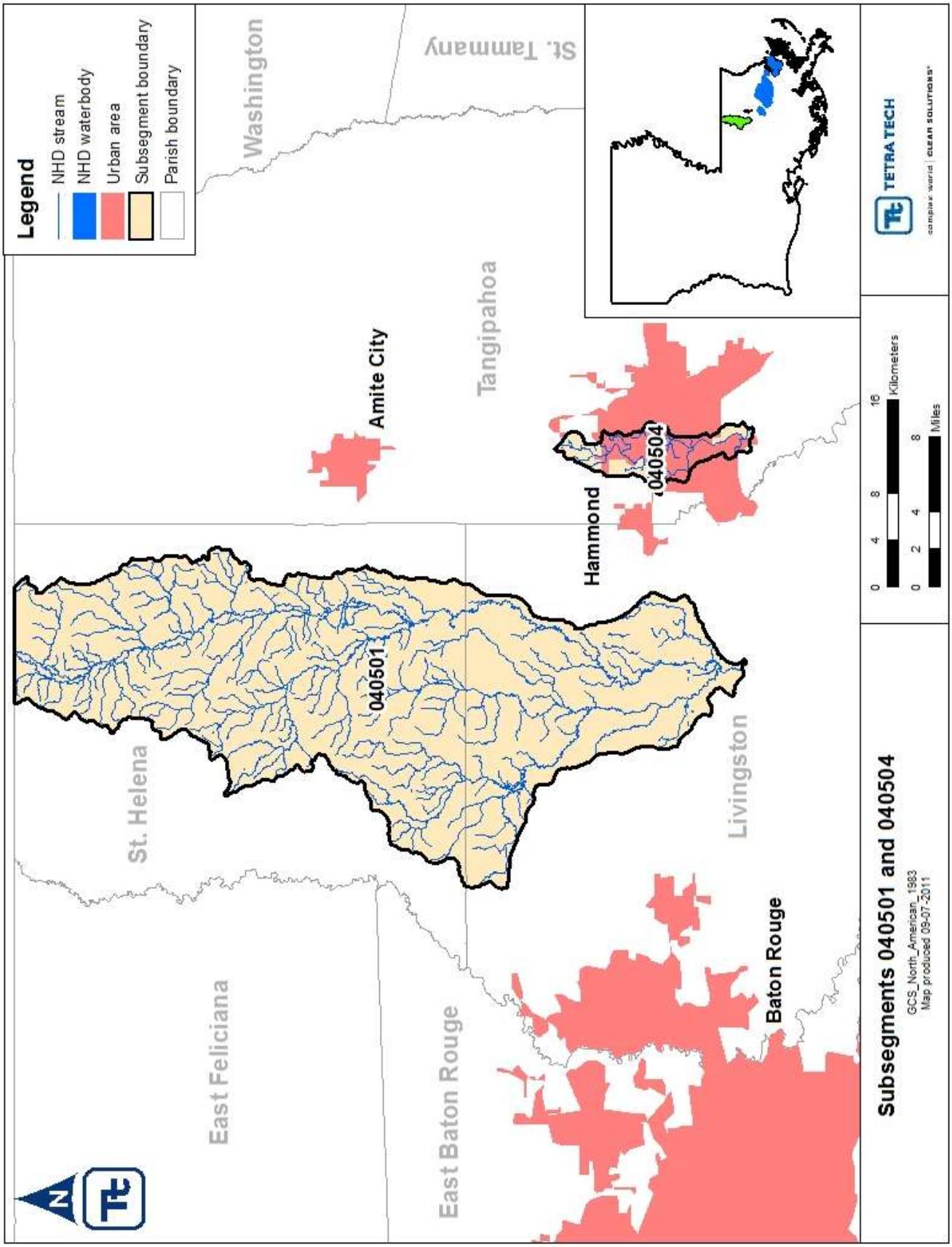

Figure 2-1. Locations of selected Lake Pontchartrain Basin subsegments.

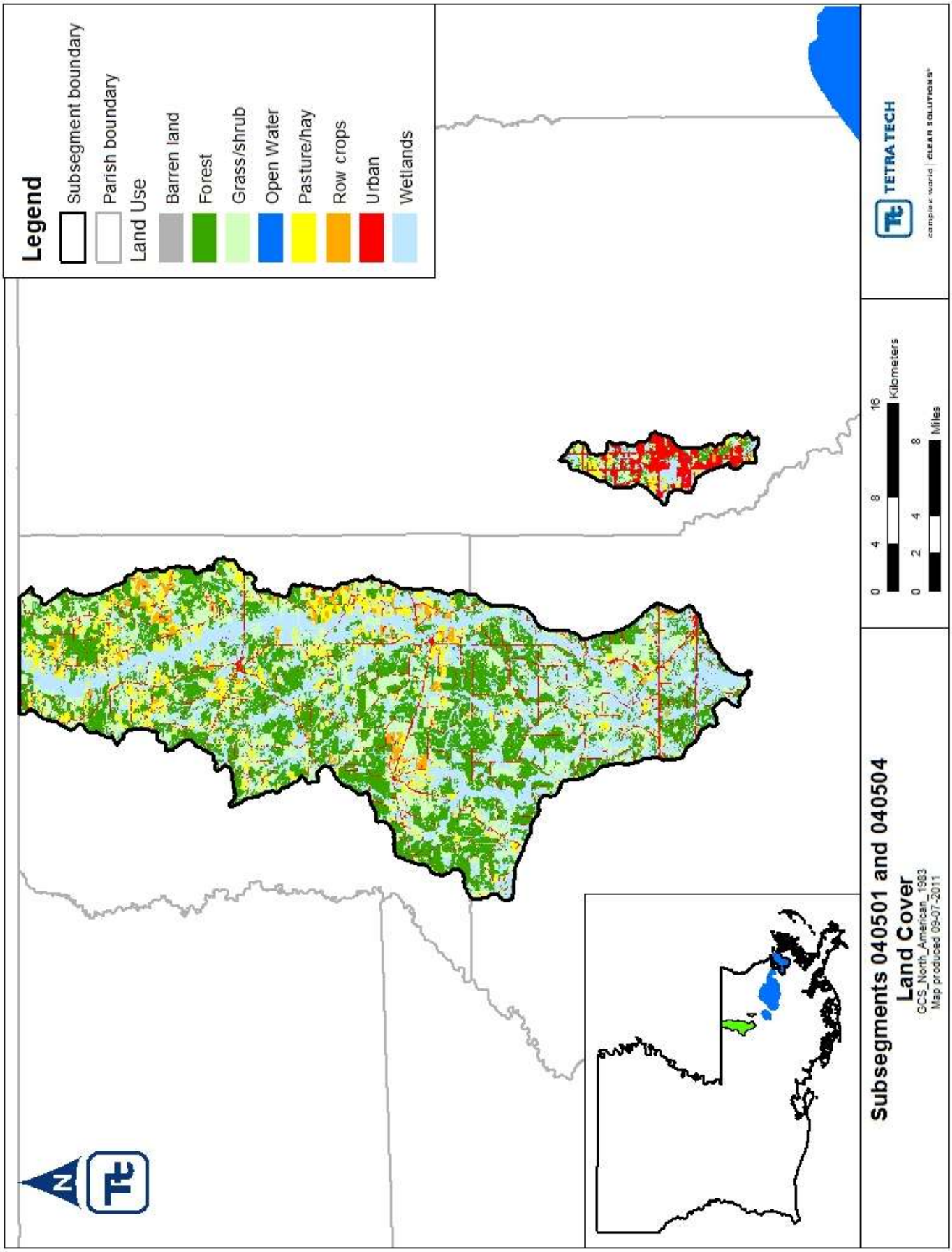

Figure 2-2. Land use in subsegments 040501 and 040504.

Several areas within the Lake Pontchartrain Basin are undergoing population growth and urban development. Rapid development is occurring in Livingston Parish, and population growth within Tangipahoa Parish has been noticeable following Hurricane Katrina. Most of this growth has involved conversion of agricultural land uses to urban land types (Bourgeois-Calvin 2008).

2.3 Hydrologic Setting

Historical data are available from three active USGS flow-monitoring gages for subsegment 040501, and from one station near subsegment 040504 of the Lake Pontchartrain Basin. Table 2-2 presents information for the nearby flow gages, and Figure 2-3 shows locations of the selected USGS stations.

As part of an estuarine system, portions of waterbodies within the Lake Pontchartrain Basin subsegments are influenced by tidal action, especially those close to Lake Maurepas, Pontchartrain, or Borgne. In portions of the Tickfaw River in subsegment 040501, tidal influences are believed to occur south of Springville. In the Yellow Water River (subsegment 040504), tidal action is believed to take place south of Louisiana State Highway 22 (Max Forbes, LDEQ, personal communication, May 31, 2011).

Table 2-2. USGS gage information for subsegments 040501 and 040504

Station number	Station name	Date Range	Drainage area (sq. mi.)	Average flow (cfs)
07375800	Tickfaw River at Liverpool, LA	04/01/56–02/10/11[a]	89.7	107.47
07375960	Tickfaw River at Montpelier, LA	05/17/01–02/10/11[a]	220.0	320.55
07376000	Tickfaw River at Holden, LA	10/01/40–02/10/11[a]	247.0	376.06
07376500	Natalbany River at Baptist, LA	09/01/43–02/10/11[a]	79.5	115.24

[a] Data pull date. More recent data are now available.

2.4 Designated Uses and Water Quality Criteria

Louisiana's 2010 section 303(d) list (as included in the *Draft 2010 Integrated Report*) indicates that designated uses of the subsegments are primary contact recreation, secondary contact recreation, and fish and wildlife propagation. Primary contact recreation includes any recreational or other water contact involving full-body exposure to water and a considerable probability of ingesting water. Examples of this use are swimming and water skiing. Secondary contact recreation involves activities like fishing, wading, or boating, whereby water contact is accidental or incidental, and the chance of ingesting appreciable amounts of water is minimal. Fish and wildlife propagation includes the use of water for aquatic habitat, food, resting, reproduction, cover, or travel corridors by any indigenous wildlife and aquatic life species associated with the aquatic environment. The fish and wildlife propagation use also includes maintaining water quality at a level that prevents damage to native wildlife and aquatic species associated with the aquatic environment, and prevents contamination of aquatic life consumed by humans (LDEQ 2010a). The impaired designated uses are listed in Table 1-1 above.

The assessment methodology presented in LDEQ's 305(b) report (LDEQ 2010a) specifies that primary contact recreation, secondary contact recreation, and fish and wildlife propagation uses are to be fully supported. Water quality criteria for TDS in this TMDL are 55 mg/L for subsegment 040501 and 150 mg/L for subsegment 040504 year-round.

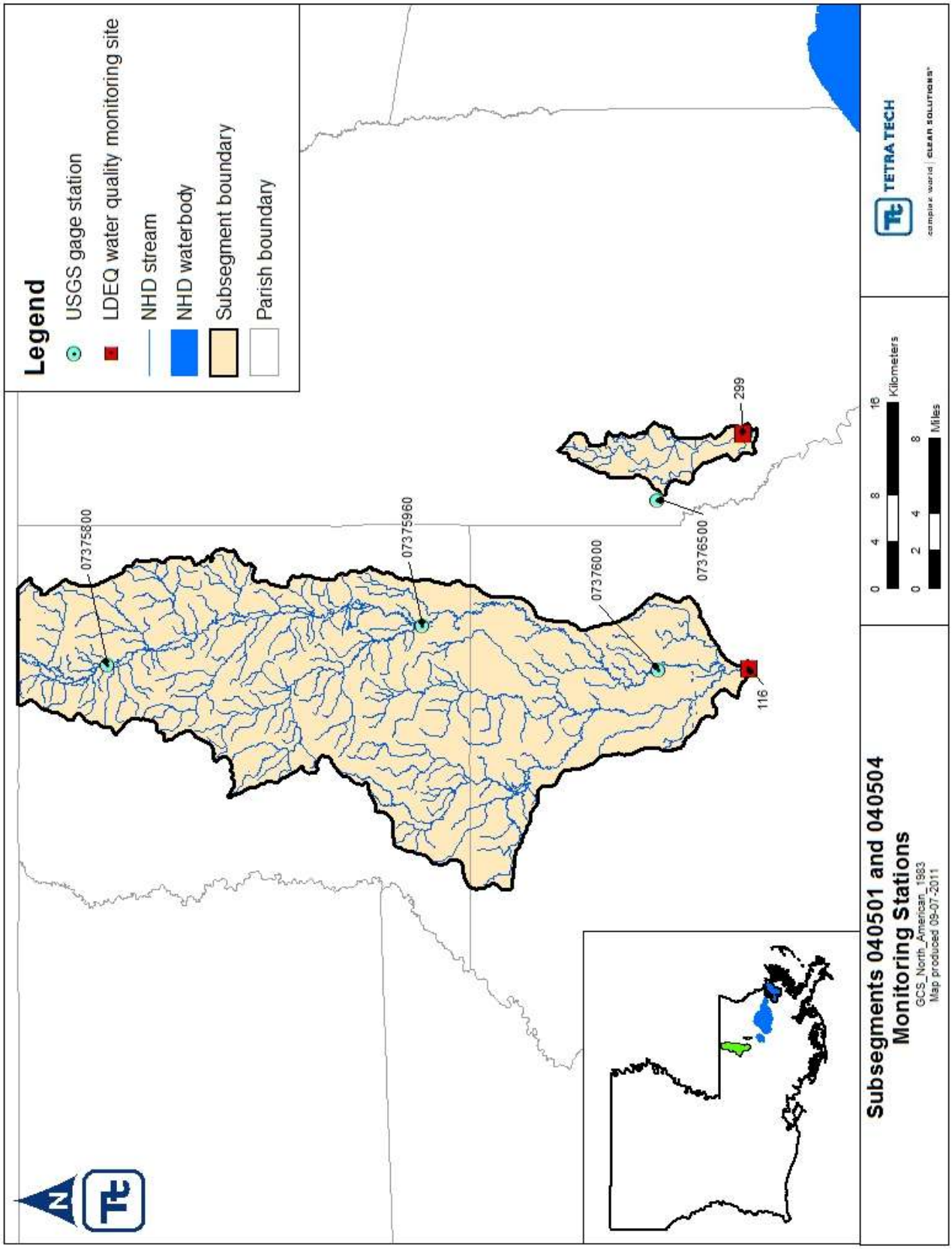

Figure 2-3. Locations of water quality sampling stations in the Lake Pontchartrain Basin.

The Louisiana water quality standards also include an antidegradation policy (*Louisiana Administrative Code* [LAC] Title 33, Part IX, Section 1109.A), which specifies that state waters exhibiting high water quality should be maintained at that high level of water quality. If that is not possible, water quality of a level that supports the designated uses of the waterbody should be maintained. The designated uses of a waterbody may be changed to allow a lower level of water quality only through a use attainability study.

2.5 Identification of Sources

2.5.1 Point Sources

LDEQ stores permit information using internal databases. LDEQ generated a list of point source discharges in the subsegments by using the TEMPO database. Information on point source discharges to the listed subsegments was obtained from the Integrated Compliance Information System - National Pollutant Discharge Elimination System (ICIS-NPDES) and Louisiana's Electronic Document Management System (EDMS). Data were pulled from ICIS for the list of permits generated by LDEQ, and data were confirmed through EDMS. Each facility was evaluated on the basis of its discharges and permit limits to determine whether the facility should be used in developing the TMDLs. The evaluation yielded 25 active permitted point source discharges in subsegment 040501 and 71 active permitted point source dischargers (9 terminated permits) into subsegment 040504 (Figure 2-4). Because of the large number of permits, they are listed in Appendix A.

Several facilities in the selected subsegments have TDS permit limits (Appendix D); however, there could be additional potential sources including sewage treatment plants and wash water outfalls (LDEQ 2011a). One source of TDS in portions of the Lake Pontchartrain Basin includes potable water originating from groundwater. Groundwater quality analysis in a nearby subsegment (040201) within the Lake Pontchartrain has indicated significant concentrations of TDS (LDEQ 2011a). Potable water used by homes, businesses, and public agencies is sent to sewage treatment plants, which are then responsible for treating the additional pollutant loadings. Other sources of loading could also include lawn watering, washing cars or buildings, recreational uses of water, and individual home sewage treatment units (LDEQ 2011a). Additional research and data collection related to load contributions from other potential sources are suggested as part of the phased TMDL approach outlined in Section 5.2.

Phase I and II stormwater systems are additional possible point source contributors within the Lake Pontchartrain Basin. Stormwater discharges are generated by runoff from urban land and impervious areas such as paved streets, parking lots, and rooftops during precipitation events. These discharges often contain high concentrations of pollutants that can eventually enter nearby waterbodies. Most stormwater discharges are considered point sources and require coverage by a NPDES permit.

Under the NPDES stormwater program, operators of large, medium, and regulated small municipal separate storm sewer systems (MS4s) must obtain authorization to discharge pollutants. The Stormwater Phase I Rule (55 *Federal Register* 47990, November 16, 1990) requires all operators of medium and large MS4s to obtain a NPDES permit and develop a stormwater management program. Medium and large MS4s are defined by the size of the population within the MS4 area, not including the population served by combined sewer systems. A medium MS4 has a population between 100,000 and 249,999; a large MS4 has a population of 250,000 or more.

Phase II requires a select subset of small MS4s to obtain an NPDES stormwater permit. A small MS4 is any MS4 not already covered by the Phase I program as a medium or large MS4. The Phase II rule automatically covers all small MS4s in urbanized areas (UAs), as defined by the Bureau of the Census, and also includes small MS4s outside an UA that are so designated by NPDES permitting authorities, case by case (USEPA 2000).

In Louisiana, a MS4 can be identified as a regulated, small MS4 in two ways. This category includes all cities within UAs and any small MS4 area outside UAs with a population of at least 10,000 and a population density of at least 1,000 people per square mile (LDEQ 2002). The city of Hammond is a small MS4 (AI 104053, LAR041030) within subsegment 040504. No regulated MS4s are in subsegment 040501.

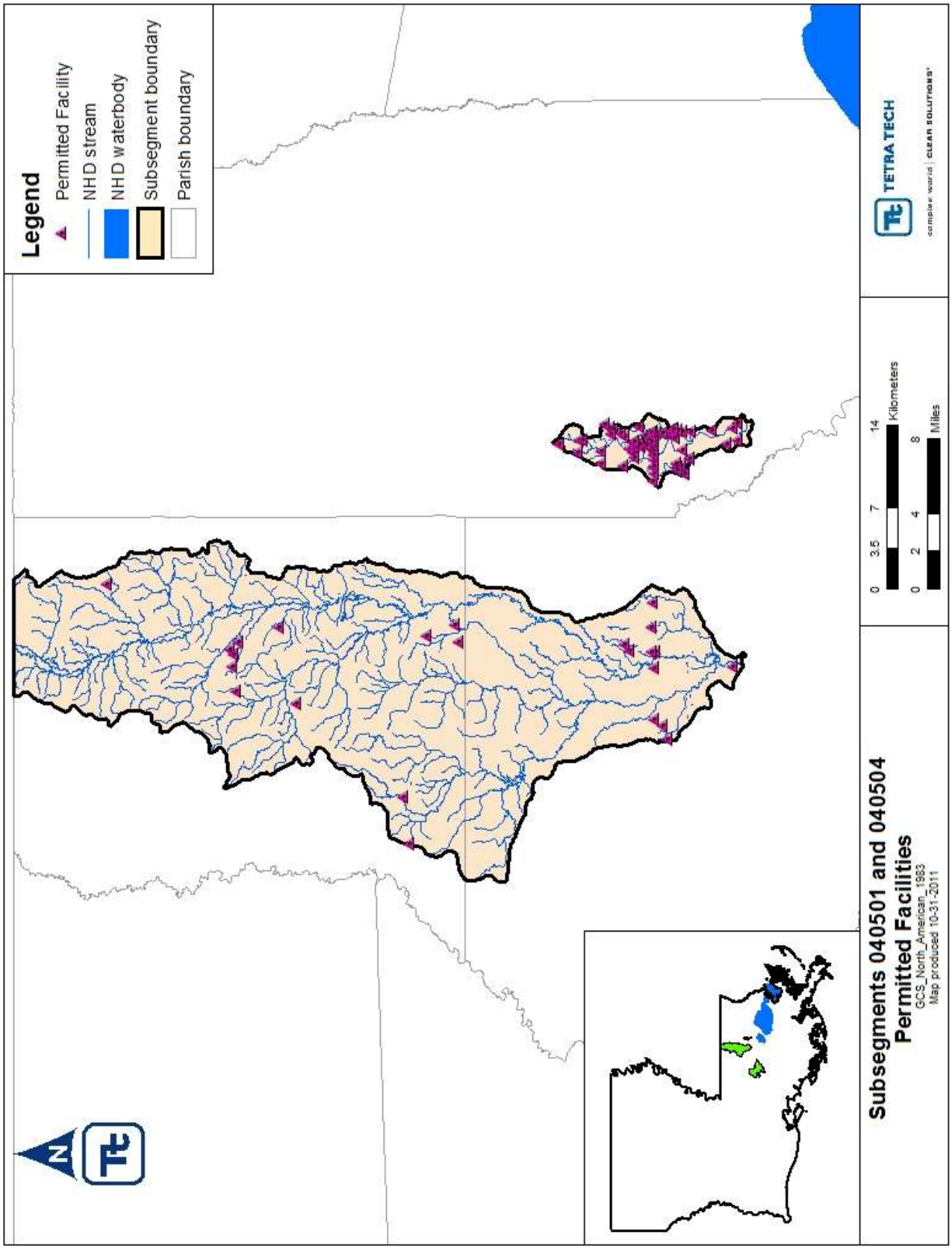

Figure 2-4. Locations of LDEQ permitted facilities in Lake Pontchartrain Basin.

2.5.2 Nonpoint Sources

Louisiana's 2010 section 303(d) list (*Draft 2010 Integrated Report*) identifies suspected causes for the TDS impairment in subsegment 040501 as *drainage/filling/loss of wetlands* (LDEQ 2010a). Draining, filling, or loss of wetlands can impact associated wetland functions such as water storage, sediment trapping, recharge, and habitat (FISRWG 1998).

Within subsegment 040504, the suspected causes for impairment are listed as *drought-related impacts and site clearance (and development or redevelopment)* in Louisiana's draft 2010 section 303(d) list. Drought episodes, especially multi-year events, can lead to a decrease in water supply, which can accentuate pollution problems (LDEQ 2010a). Site clearance activities include urban areas and industrial parks or other construction sites outside of municipalities (LDEQ 2010a). Site clearance related to new construction or filling in of vacant lands within areas of previous development (redevelopment) often involves converting pervious land types to more impervious land cover (USEPA 1992). Development often results in alteration of physical, chemical, and biological characteristics of a watershed. Examples of hydrological impacts include increased runoff volumes, altered channel geometry, sedimentation, and contamination (FISRWG 1998). Increased impervious cover also prevents rain from recharging groundwater, which can lead to lower baseflows in streams, especially during long dry periods (FISRWG 1998). Various construction activities are now regulated as Phase II stormwater regulations (LDEQ 2010a).

3. Characterization of Existing Water Quality

3.1 Water Quality Data

Water quality data were obtained from LDEQ's routine ambient water quality monitoring program. Two water quality stations (116 and 299) furnished data relevant to the subsegments addressed in this report (040501 and 040504) (Figure 2-3). Table 3-1 summarizes the observations at LDEQ water quality stations in subsegments 040501 and 040504, including the number of observations and the minimum, maximum, and average TDS concentrations. Appendix B presents the raw water quality data.

Table 3-1. Summary of available TDS data

Subsegment	Station	Station name	Period of record	No. of obs.	TDS min. (mg/L)	TDS max. (mg/L)	TDS ave. (mg/L)
040501	116	Tickfaw River at Springville, Louisiana	4/10/78–5/4/10	310	2	280	59.8
040505	299	Yellow Water River west of Ponchatoula, Louisiana	1/14/91–5/4/10	76	88	494	197.8

3.2 Comparison of Observed Data to Criteria

Louisiana's draft 2010 section 303(d) list identifies subsegments 040501 and 040504 for TDS impairments within the Lake Pontchartrain Basin (LDEQ 2010a) that this TMDL addresses. Monitoring data collected by LDEQ indicate that observed TDS concentrations sometimes do not meet the state's water quality criteria for subsegments 040501 and 040504. The year-round water quality criteria are 55 mg/L within subsegment 040501 and 150 mg/L within subsegment 040504.

3.3 Trends and Patterns in Observed Data

The TDS data were plotted over time for both impaired subsegments (Figures 3-1 through 3-4). On Figures 3-1 and 3-2, water quality data were plotted over a continuous time scale. On Figures 3-3 and 3-4, water quality data were grouped by sampling month. On both sets of charts, no distinct seasonal or temporal trends or patterns are evident in the water quality data. TDS data were not compared to flow because at least portions of these subsegments are within tidal areas for which no representative flow data are available.

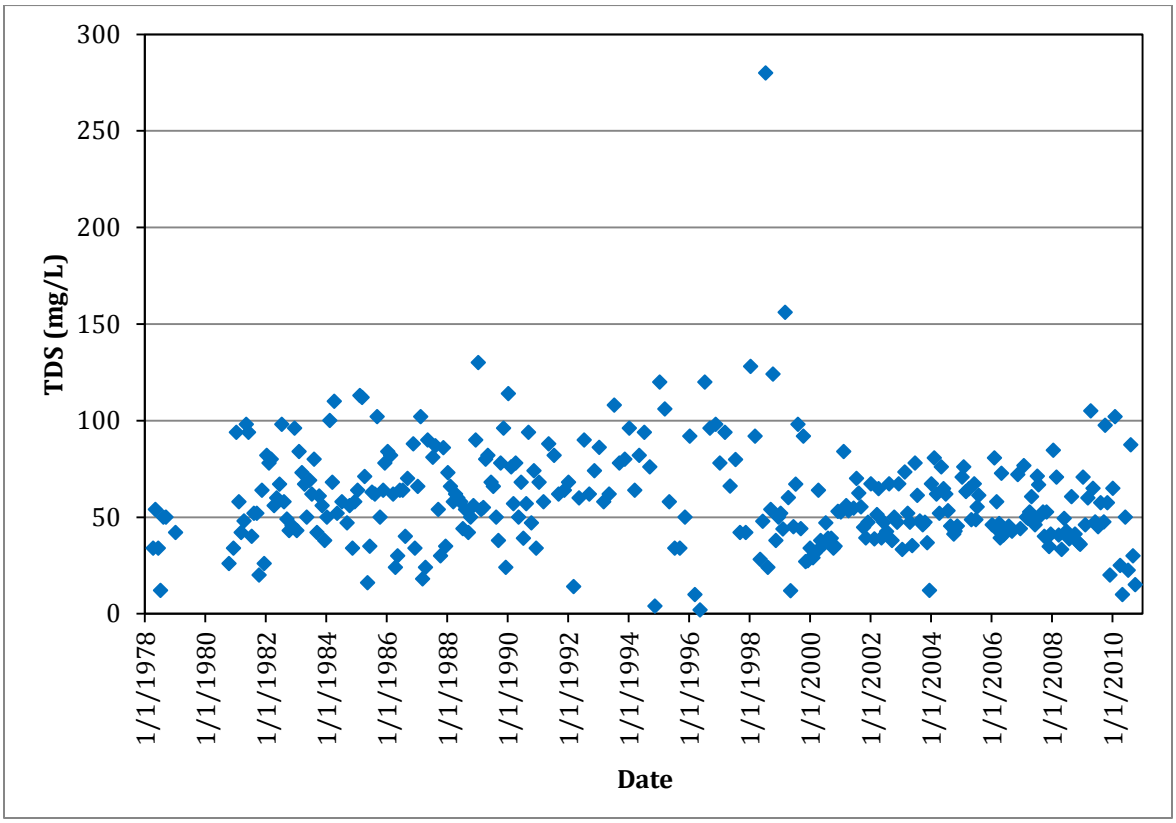

Figure 3-1. TDS concentrations over time at station 116 on subsegment 040501.

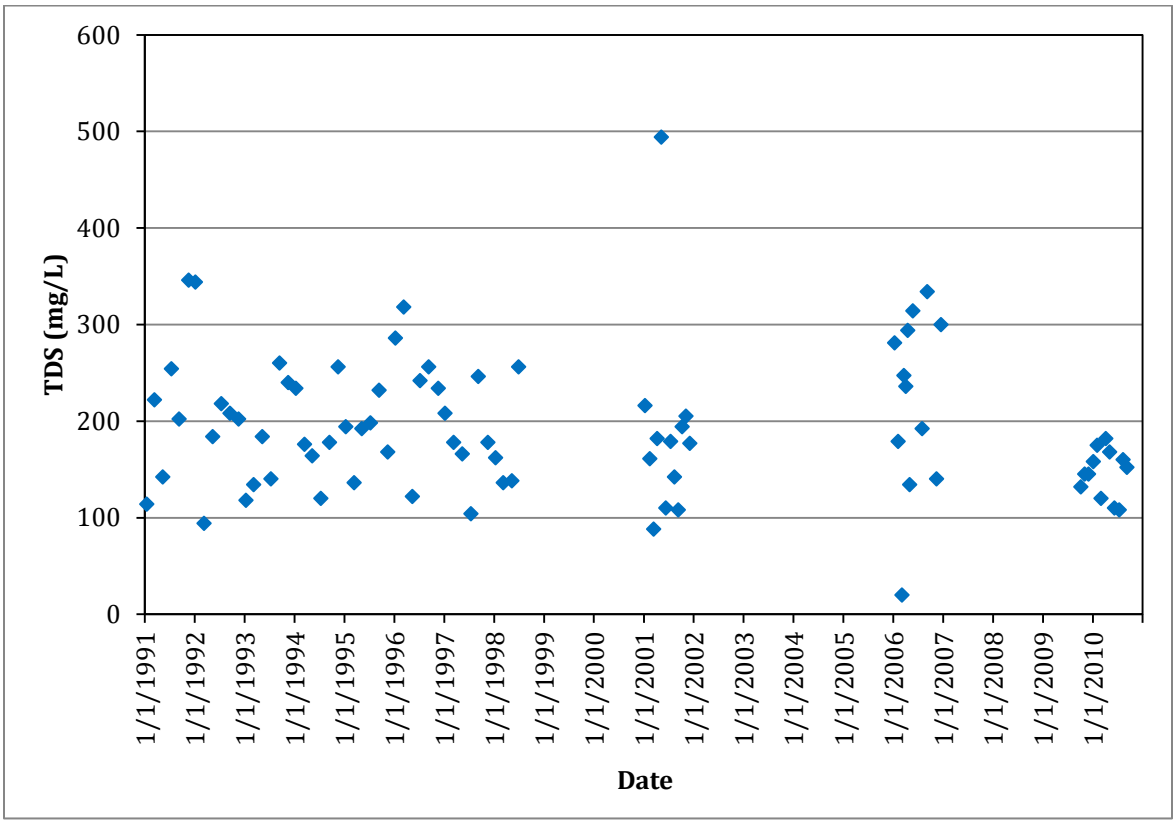

Figure 3-2. TDS concentrations over time at station 299 on subsegment 040504.

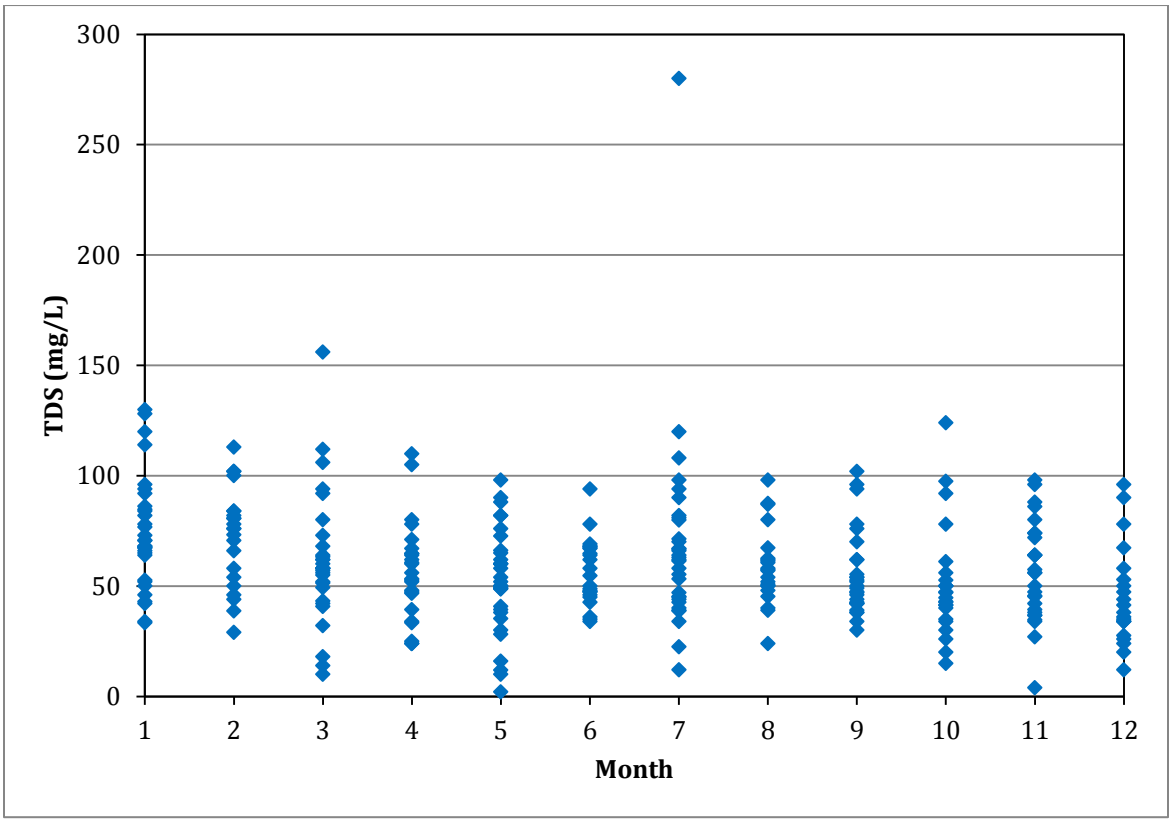

Figure 3-3. Seasonal TDS concentrations at station 116 on subsegment 040501.

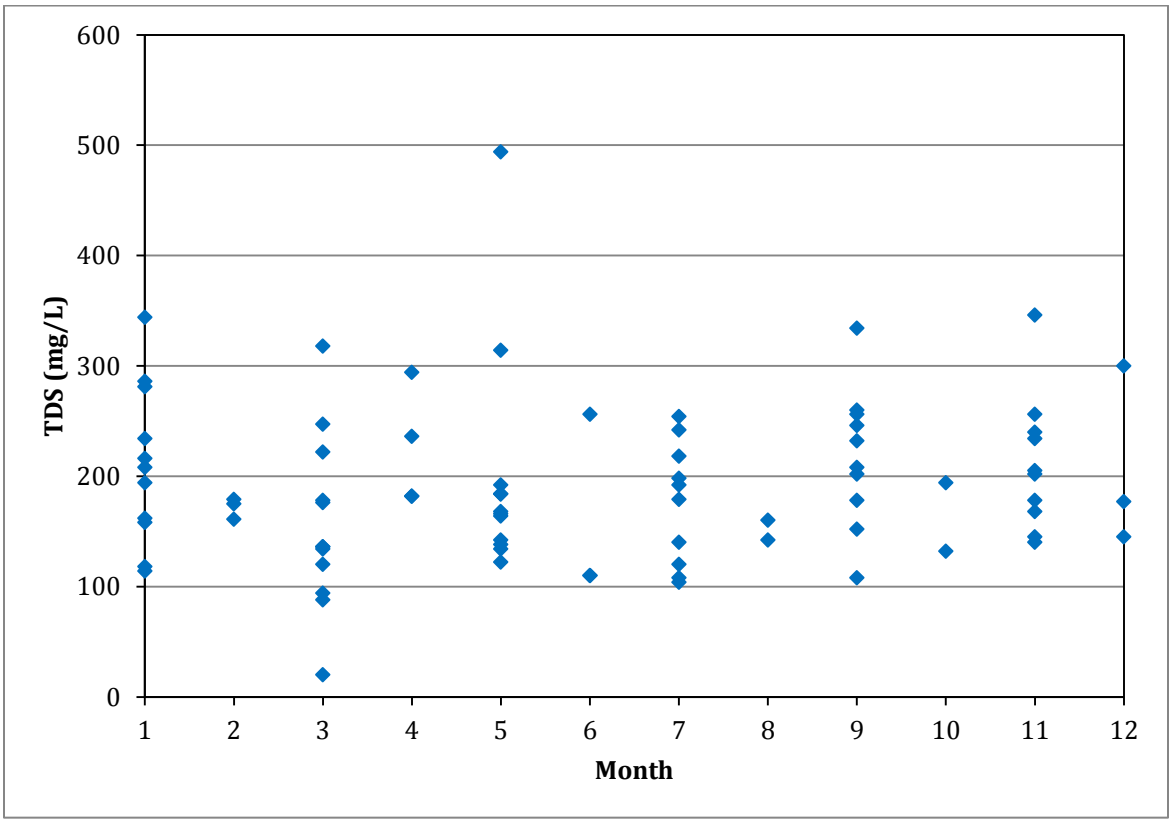

Figure 3-4. Seasonal TDS concentrations at station 299 on subsegment 040504.

4. TMDL Development

A TMDL is the total amount of a pollutant that can be assimilated by the receiving waterbody while still achieving water quality standards. In TMDL development, allowable loadings from all pollutant sources that cumulatively amount to no more than the TMDL must be established and thereby provide the basis for establishing water quality-based controls.

A TMDL for a given pollutant and waterbody is calculated using the sum of individual WLAs for point sources and LAs for nonpoint sources and natural background levels. In addition, the TMDL must include an implicit or explicit margin of safety (MOS) to account for the uncertainty in the relationship between pollutant loads and the quality of the receiving waterbody, and it may include a future growth (FG) component. The components of the TMDL calculation are illustrated using the following equation:

$$TMDL = \sum WLAs + \sum LAs + MOS + FG$$

4.1 TMDL Analytical Approach

For this TMDL, the water quality targets of each subsegment (Table ES-2) were multiplied by the average daily runoff to determine the TMDL loading. Because of flow dynamics of the selected subsegments within the Lake Pontchartrain Basin where stream flow could not be used, the monthly water yield was used to obtain TMDL loadings. Monthly water yields for the East Central Climate Divisions were obtained from the Louisiana Office of State Climatology and used to characterize conditions in subsegments 040501 and 040504. The monthly water yield was divided by the number of days in the month to obtain runoff intensity. Available data from 1980 to 2003 were averaged to obtain an annual average of 2.509 millimeters per day for the selected subsegments.[1] Flows from point sources were not incorporated in the water yield. This method produces loading on the basis of expected average flows, and does not rely on expected point source flows to meet water quality criteria.

4.2 TMDL, WLA, and LA

The TDS TMDLs for the Lake Pontchartrain Basin subsegments 040501 and 040504 were calculated on the basis of each subsegment's water quality criteria and average local water yield. The water quality criterion was multiplied by the average water yield and the calculated drainage area of each subsegment to estimate the total allowable load. A summary of the TMDLs is presented in Table 4-1.

Table 4-1. Summary of TDS TMDLs, WLAs, LAs, MOS, and FG for the Lake Pontchartrain Basin

Subsegment	TMDL (lb/d)	WLA (lb/d)	LA (lb/d)	Explicit MOS (lb/d)	FG (lb/d)
040501	255,984.3	266.6	204,574.2	25,571.8	25,571.8
040504	39,961.1	23,248.3	9,298.9	3,706.9	3,706.9

4.2.1 Wasteload Allocation

The WLA portion of the TMDL equation is the total loading of a pollutant that is assigned to point sources. The point sources within the selected subsegments of the Lake Pontchartrain Basin include sanitary and industrial wastewater facilities, and industrial stormwater. This TMDL provides allocations as a starting point for permit writing, and carries assumptions as to which permits received allocations and the targets and flow used in the allocation. Because of the large number of permits, the individual WLAs for each point source included in these Lake Pontchartrain Basin TMDLs are presented in Appendix D. The WLAs for subsegments 040501 and 04054 are presented in Table 4-1.

[1] The Louisiana Office of State Climatology did not respond to requests for updated data.

In calculating the WLAs, the preferred facility flow was the facility design or expected flow. If neither was available, the average (expected or observed) flows were used to calculate the WLAs. The permit maximum flow was used if the permitted or average flow was not available. The permit maximum flow was usually the maximum flow covered by the specific type of general permit. For example, the Louisiana Pollution Discharge Elimination System (LPDES) Class II Sanitary General Permit covers facilities with flow rates of up to 25,000 gallons per day. The permit maximum flow sometimes significantly exceeded the expected flow, and therefore the permit maximum was used only when other flows were not available.

To be conservative, the facilities were assigned WLAs using a water quality target, and no point source has been given a reduction from that level. That was done to ensure that water quality targets are met during critical conditions. It is not known if upstream discharges are sufficient to cause dilution during these critical conditions of little or no flow. Those WLAs should be confirmed during the permitting process. To avoid an unnecessary permitting process or unintended monitoring requirements for a number of sources that may not be discharging the pollutants of concern, LDEQ will review these WLAs during the permitting process on a case-by-case basis. LDEQ then will determine if a permit limit is appropriate or if the permittee reasonably could cause or contribute to a water quality violation (with LDEQ ensuring that the goals of the TMDL are still being met). As long as existing or future point source discharges contain concentrations at or below water quality criteria or target, they should not cause a violation of water quality targets. Although the derived WLAs are for TDS, meeting the WLAs might not be necessary if alternative remediation and future monitoring indicate control of TDS concentrations without reduction of WLAs. The decision to specify a WLA for those point sources does not reflect any EPA determination of a required effluent limit in their respective NPDES permits.

EPA's stormwater permitting regulations require municipalities to obtain permit coverage for all stormwater discharges from MS4s. For each MS4 in the basin, a gross MS4 load was computed by multiplying the LA by the ratio of the MS4 area in each subsegment to the subsegment area. Note that those values are estimates that can be refined in the future as more information about the MS4s and land-use-specific loadings becomes available. Note also that the MS4 loads presented reflect only that portion of the MS4 in the subsegment. The computed MS4 load was subtracted from the LA and included as a WLA component of the TMDL because MS4s are permitted dischargers but function similarly to nonpoint sources (through storm-driven processes). EPA expects that the MS4 WLAs will be achieved through best management practices (BMPs) and adaptive management.

Table 4-2 lists the individual WLAs for the MS4s identified in Section 2.5. For those dischargers, LDEQ is not providing allocations or permit limits, and it is not the intention of this TMDL to assign permit limits. If, at some time in the future, LDEQ determines that any of the discharges might contain those parameters, WLAs may be specified along with the appropriate permit conditions.

Table 4-2. TDS WLAs for the MS4s within the selected subsegments in Lake Pontchartrain Basin

Subsegment	Urban area (UA)	NPDES number	MS4 area (acres)	MS4 WLA (lb/day)
040504	City of Hammond	LAR041030	7,583	20,356.2

4.2.2 Load Allocation

The LA is the portion of the TMDL assigned to natural background loadings, as well as nonpoint sources urban runoff and other anthropogenic sources. For this TMDL, the LA was calculated by subtracting the WLA, MOS, and FG from the total TMDL. LAs were not allocated to separate nonpoint sources because of a lack of available source characterization data. The LAs are presented in Table 4-1.

4.3 Seasonality and Critical Conditions

The federal regulations at 40 CFR 130.7 require that TMDLs include seasonal variations and take into account critical conditions for streamflow, loading, and water quality parameters. For this TMDL, TDS sampling results were plotted over time and reviewed for any seasonal patterns (see Section 3.2). The water quality criteria for

TDS apply all year, accounting for seasonal variations. These TMDLs were developed over a several-year period, therefore accounting for seasonal variations.

4.4 Margin of Safety

Section 303(d) of the Clean Water Act and the regulations at 40 CFR 130.7 require that TMDLs include a MOS to account for uncertainty in available data or in the actual effect that controls will have on the loading reductions and quality of the receiving water. The MOS may be expressed explicitly as unallocated assimilative capacity or implicitly using conservative assumptions in establishing the TMDL. In addition to the MOS, a FG component may be added to account specifically for FG within the TMDL area. For this analysis, the MOS is explicit: 10 percent of each targeted TMDL was reserved as the MOS to account for any uncertainty in the TMDL. Using 10 percent of the TMDL load provides an additional level of protection to the designated uses of the subsegments of concern.

4.5 Future Growth

The MOS is an allocation for scientific uncertainly, while the FG is an allocation for growth. Ten percent of the load was allocated for FG in the area covered by the TMDL. This growth includes future urban development, including point sources, MS4 areas, agriculture, and other nonpoint sources. The FG could also be used for unaccounted or unknown sources not included in the TMDL.

5. Future Activities

This section discusses TMDL implementation strategies, environmental monitoring activities, and stormwater permitting requirements and presumptive BMPs for the TMDL within subsegments 040501 and 040504.

5.1 TMDL Implementation Strategies

Current TMDL requirements do not require inclusion of implementation plans in TMDL reports. Louisiana is responsible for developing and implementing the TMDL implementation plans. Section 303(d) of the Clean Water Act and the implementing regulations at 40 CFR 130.7 specify that EPA has no authority to approve or disapprove TMDL implementation plans. WLAs will be implemented through LPDES permit procedures. LDEQ was delegated to manage the NPDES program in August 1996, and LDEQ is responsible for all permits covered by the delegation package. As part of that designation, a Memorandum of Agreement (MOA) was established between LDEQ and EPA. The designation and memorandum were revised in April 2004. In accordance with Section 1.C of the NPDES MOA between LDEQ and EPA (Revision 1, April 28, 2004), EPA has the responsibility of providing continued technical and other assistance, including interpreting and implementing federal regulations, policies, and guidelines on permitting and enforcement matters. The MOA further states that LDEQ has primary responsibilities for implementing the LPDES program in Louisiana, including applicable sections of the federal Clean Water Act, applicable state legal authority, the applicable requirements of 40 CFR Parts 122–125, and any other applicable federal regulations establishing LPDES program priorities with consideration of EPA Region 6 and national NPDES goals and objectives. For details on the designation and agreement, see the EPA Region 6 website at http://www.epa.gov/region6/water/lpdes/.[2] LDEQ's position is that, if any unresolved LDEQ comments to these TMDLs become the basis for an EPA Region 6 objection to an LDEQ-drafted permit or permittee objection/appeal of an LDEQ drafted permit, LDEQ may relinquish permitting authority to EPA Region 6.

LAs will be addressed through the LDEQ Nonpoint Source Management Program. Louisiana's *Nonpoint Source Management Plan* (LDEQ 2010b) states that TMDLs are being developed through a close relationship between LDEQ and EPA Region 6. It further states that, "[m]anagement strategies outlined within this document (both statewide and watershed) will be implemented in each of the watersheds where water quality problems have been attributed to nonpoint sources of pollution." On page ii, Objective 3 of the watershed management strategies is to, "utilize pollutant load reductions of the TMDL to develop nonpoint source pollution reduction strategies for each of the watersheds...that have water quality problems identified."

The plan includes a discussion of a number of nonpoint source activities and provides BMPs that can be used to achieve the nonpoint source load reductions established in these TMDLs. The plan broadly discusses programs to address agriculture, forestry, hydromodification, urban runoff, construction, and resource extraction. Provided with each BMP is an evaluation of the BMP's effectiveness, ranked as high, medium, or low. Additional evaluations should be conducted to determine the most likely source of impairment within this watershed and to identify localized hot spots to be targeted for effective BMP implementation. These and other BMPs can be implemented at a scale adequate to achieve the load reductions established in the TMDL.

5.2 LDEQ Phased TMDL Apporach

LDEQ is using a phased approach to TMDL implementation, as shown in Table 5-1. The approach will allow LDEQ to gather more data for individual outfalls. In addition, LDEQ will have the opportunity to evaluate and revise the TDS criteria for a subsegment by developing a meaningful and implementable TDS TMDL on the basis of TDS criteria that is appropriate for a specific waterbody and in accordance with the Consent Decree deadlines. In addition, it will lead to improved water quality while providing entities the opportunity to prepare for potential new permit requirements as a result of the TMDL developed in Phases I and II (LDEQ 2011a).

[2] Accessed January 11, 2011.

Table 5-1. Phased TMDL approach

Stage/phase	TDS criteria (mg/L)
Phase I: Phase I implementation required upon EPA approval of the TMDL and subsequent update of Louisiana's WQMP	Subsegment 040501: 55 Subsegment 040504: 150
Primary Activities: Ecoregion-based UAA developed and DO criteria revised and promulgated	
Phase II: Phase II implementation required upon EPA approval of Phase II of the TMDL and subsequent update of Louisiana's WQMP	Appropriate criteria based on UAA

Note: UAA = Use attainability analysis

5.2.1 Phase I – Permit Implementation

All TMDL, permitting, and enforcement activities will be conducted in accordance with the Clean Water Act, the Louisiana Environmental Regulatory Code, and applicable state laws.

1. **New discharges of chlorides, sulfates, or TDS loads:** Because of the lack of knowledge regarding the loading contributions from various types of facilities, natural sources, and the contributions from the local potable water source, permits for new facility outfalls will typically require only annual monitoring during the first full permitting cycle that occurs during Phase I. However, before the subsequent renewal of each permit, an assessment of TDS monitoring data from designated outfalls could be conducted to determine if permit limits are required during Phase I. Permit limits will be established on the basis of regulatory guidelines and in accordance with LDEQ's *Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*, WQMP Volume 3 (LDEQ 2008). Facilities with new discharges may be required to submit an environmental impact assessment to LDEQ's Water Permits Division. Once the TMDL is approved by EPA and LDEQ has determined that permit limits are needed, new facilities may have up to 3 years from their next permit renewal date to meet the Phase I permit limits. Applicable General Permit schedules will be updated to meet the requirements of the TMDL upon the first renewal of each series following the TMDL approval date. Examples of facility outfalls that will be considered are provided below.

    a. Annual monitoring will be required for outfall types in the example list below. Upon renewal of each permit, existing facility data will be compared to TDS criteria within the respective subsegment (Table 5-1). Permit limits will be considered for a facility if the monitoring data exceed the referenced values.

        i. Sanitary

        ii. Vehicle or equipment wash water

        iii. Wash rack wastewater

    b. Technology-based permit limits will be established for outfall types in the example list below. Permit limits will be based on regulatory guidelines and departmental procedures.

        i. Industrial process outfalls that have demonstrated a reasonable potential to produce wastewater that will contain TDS

        ii. Stormwater for facilities identified according to item 1.b.i above

        iii. Any outfalls that have demonstrated a reasonable potential to produce wastewater that will contain TDS

2. **Existing discharges of chlorides, sulfates, or TDS loads:** Existing unpermitted facility outfalls discovered to be discharging TDS loads without LPDES permit limits as of the TMDL approval date and unpermitted facility outfalls that are newly activated or reactivated and discharging TDS loads after the TMDL approval date are to be permitted according to the guidelines established herein for existing outfalls with permits. Permit limits will be established on the basis of regulatory guidelines and in

accordance with LDEQ's *Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*, WQMP Volume 3 (LDEQ 2008). All other facilities will conduct annual monitoring as described in item 1 above. Once the TMDL is approved by EPA and LDEQ has determined that permit limits are required, existing facilities may have up to 3 years from their next permit renewal date to meet the Phase I permit limits.

3. **LDEQ reassesses subsegments 040501 and 040504.** If LDEQ determines that subsegments 040501 and 040504 are meeting the appropriate TDS criteria and designated uses or impairments for those parameters do not exist, the use of permit limits for TDS may be reevaluated by LDEQ.

5.2.2 Phase II – Use Attainability Analysis Implementation

Phase II will be developed on the basis of the outcome of a planned use attainability analysis (UAA). The UAA is expected to propose new TDS criteria. The Lake Pontchartrain Basin TMDLs have a court-ordered due date of March 31, 2012. Those new criteria are expected to be developed and promulgated within the next 5 years.

If the new criteria are not developed and promulgated within 5 years from the TMDL approval date, LDEQ intends to proceed as follows:

- **Case 1:** The UAA study indicates that the existing TDS criteria are appropriate—the TMDLs will be implemented on the basis of the existing criteria LDEQ's *Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*, WQMP Volume 3 (LDEQ 2008).
- **Case 2:** The UAA is not likely to be completed or approved—the TMDL will be implemented on the basis of the existing criteria and in accordance with LDEQ's *Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*, WQMP Volume 3 (LDEQ 2008).
- **Case 3:** The UAA is in process and is expected to be approved—Phase II of the TMDL will be postponed for 2 years maximum. If the UAA has not been completed at the end of the 2-year period, the UAA status will be reviewed again according to Cases 1–3.

5.3 Water Quality Monitoring Activities

LDEQ uses funds provided under section 106 of the Clean Water Act and under the authority of the Louisiana Environmental Quality Act to run a program for monitoring the quality of Louisiana's surface waters. The LDEQ Surveillance Section collects surface water samples at various locations using appropriate sampling methods and procedures to ensure the quality of the data obtained. The objectives of the surface water monitoring program are to determine the quality of the state's surface waters, to develop a long-term database for water quality trend analysis, and to monitor the effectiveness of pollution controls. The data obtained through the surface water monitoring program are used to develop the state's biennial section 305(b) report (*Water Quality Inventory*) and section 303(d) list of impaired waters (*Draft 2010 Integrated Report*).

LDEQ has implemented a rotating approach to surface water quality monitoring. Through the rotating approach, the entire state is sampled on a 4-year cycle. Long-term trend monitoring sites at various locations on the larger rivers and Lake Pontchartrain are sampled throughout the 4-year cycle. Sampling is conducted monthly during a water year (October through September) to yield approximately 12 samples per site during each year the site is monitored. Sampling locations are selected as representative of the waterbody. Under the current monitoring schedule, approximately one-half of the state's waters are newly assessed for section 305(b) and section 303(d) listing purposes for each biennial cycle. Monitoring allows LDEQ to determine whether any improvement in water quality occurred after the TMDLs had been implemented. LDEQ evaluates the monitoring results to generate the Integrated Report submitted by April 1 on even-numbered years. More information can be found in *Louisiana's Water Quality Assessment Method and Integrated Report Rationale: 2010 Water Quality Integrated Report* (LDEQ 2010a). Monitoring will allow LDEQ to determine whether water quality improves following TMDL implementation. As the monitoring results are evaluated at the end of each year, waterbodies might be added to or removed from the section 303(d) list of impaired waterbodies.

5.4 Stormwater Permitting Requirements and Presumptive Best Management Practices Approach

5.4.1 Background

The NPDES permitting program for stormwater discharges was established under the Clean Water Act as the result of a 1987 amendment. The Act specifies the level of control to be incorporated into the NPDES stormwater permitting program depending on the source (industrial versus municipal stormwater). These programs contain specific requirements for the regulated communities/facilities to establish a comprehensive stormwater management program (SWMP) or stormwater pollution prevention plan (SWPPP) to implement any requirements of the TMDL allocation (see 40 CFR Part 130).

Stormwater discharges vary significantly in flow and pollutant concentrations, and relationships between discharges and water quality can be complex. For municipal stormwater discharges in particular, use of system-wide permits and a variety of jurisdiction-wide BMPs, including educational and programmatic BMPs, does not easily accommodate to the existing methodologies for deriving numeric water quality-based effluent limitations. These methodologies were designed primarily for process wastewater discharges, which occur at predictable rates with predictable pollutant loadings under low-flow conditions in receiving waters. EPA has recognized such problems and has developed permitting guidance for stormwater permits (USEPA 1996).

Because of the nature of stormwater discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations (expressed as concentration and mass), EPA recommends basing an interim permitting approach for NPDES stormwater on BMPs. EPA permitting guidance states that, "[t]he interim permitting approach uses BMPs in first-round storm water permits, and expanded or better-tailored BMPs in subsequent permits, where necessary, to provide for the attainment of water quality standards" (USEPA 1996).

A monitoring component is also included in the recommended BMP approach. According to EPA permitting guidance, "each storm water permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits" (USEPA 1996). This approach was further elaborated in a guidance memo issued in 2002, "The policy outlined in this memorandum affirms the appropriateness of an iterative, adaptive management BMP approach, whereby permits include effluent limits (e.g., a combination of structural and nonstructural BMPs) that address stormwater discharges, implement mechanisms to evaluate the performance of such controls, and make adjustments (i.e., more stringent controls or specific BMPs) as necessary to protect water quality…If it is determined that a BMP approach (including an iterative BMP approach) is appropriate to meet the storm water component of the TMDL, EPA recommends that the TMDL reflect this" (Wayland and Hanlon 2002). This BMP-based approach to stormwater sources in TMDLs is also recognized and described in the most recent EPA guidance (USEPA 2008).

This TMDL adopts the EPA-recommended approach and relies on appropriate BMPs for implementation. No numeric effluent limitations are required or anticipated for municipal stormwater discharge permits.

5.4.2 Specific SWMP/SWPPP Requirements

As discussed in the Louisiana Small MS4 NPDES permit, if a TMDL assigns an individual WLA specifically to a MS4's stormwater discharge, LDEQ's permit specifies that the WLA must be included as a measurable goal for the SWMP.

Examples of activities that the MS4 may conduct to be consistent with the WLA include:

- Monitoring to evaluate program compliance, the appropriateness of identified BMPs, and progress toward achieving identified measurable goals
- Development of a schedule for implementation of additional controls and/or BMPs, if necessary, on the basis of monitoring results, to ensure compliance with applicable TMDLs.

6. Public Participation

Federal regulations require EPA to notify the public and seek comments concerning the TMDLs it prepares. These TMDLs were developed under contract to EPA, and EPA held a public review period seeking comments, information, and data from the public and any other interested parties. The notice for the public review period is tentatively scheduled to be published in the *Federal Register* on November 15, 2011, and the review period tentatively set to close on December 31, 2011. Any comments will be reviewed, and these TMDLs may be revised if appropriate. If any comments are submitted they, will be included in a new appendix in the final TMDL along with EPA responses.

EPA will submit the final TMDL to LDEQ for implementation and incorporation into LDEQ's current WQMP.

7. References

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APPENDIX A:
Point Source Discharges in Subsegments 040501 and 040504 in the Lake Pontchartrain Basin

Table A-1. Active point source discharge permit information for 040501 ..... A-1
Table A-2. Active point source discharge permit information for 040504 ..... A-2
Table A-3. Terminated point source discharge permits for 040504 ..... A-7

Table A-1. Active point source discharge permit information for 040501

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
6858	LA0051969	001	Process wastewater conisisting of kitchen grease separation water, washdown wastewater from process area, boiler blowdown, and stormwater runoff	Griffin Industries Inc	Food And Kindred Products	03/31/12	unnamed ditch to Tickfaw River
19437	LA0039179	001	Treated sanitary wastewater	Livingston Town of - Sewage District Plant #1	General Agency Interest	01/31/16	Beaver Pond Branch- to Hog Branch to Tickfaw River
19872	LA0071137	001	Treated discharge of operational reactor and pad washwater, stormwater, cooling tower blowdown, boiler blowdown, laboratory wastewater, sanitary wastewater	Amerchol Corp	Chemicals And Allied Products	10/31/10	Bracheen Branch to Spring Branch to Richfaw River
19872	LA0071137	002	Low contamination potential stormwater runoff	Amerchol Corp	Chemicals And Allied Products	10/31/10	Bracheen Branch to Spring Branch to Richfaw River
84111	LAG541058	001	Treated sanitary wastewater	Lucky Magnolia Truck Plaza & Casino	Nonclassifiable Establishments	06/30/13	Through local drainage then to the Claibourne Branch
71	LA0111724	002	Equipment washing wastewater, groundwater infiltrate, air condensate	Gulf South Pipeline Co LP - Montpelier Compressor Station	Electric, Gas, And Sanitary Services	07/31/11	ditch to Bear Creek to Tickfaw River
2961	LA0121398	001	Shipping water, treated sanitary wastewater and storm water	MCM Plastics Inc - Sterling Inc	General Agency Interest	10/31/10	local drainage to Big Branch to Tickfaw River
18184	LAG540479	001	Treated sanitary wastewater	Holden High School	Educational Services	06/30/13	Mayhow Branch to Big Branch to Lizard Creek, to Blood River to Tickfaw River
19875	LA0056421	001	Treated sanitary wastewater	Weyerhaeuser NR Co - Holden Wood Products	Lumber And Wood Products, Except Furniture	05/31/13	dotch - Big Branch - Tickfaw River
19875	LA0056421	001	Noncontact cooling water	Weyerhaeuser NR Co - Holden Wood Products	Lumber And Wood Products, Except Furniture	05/31/13	dotch - Big Branch - Tickfaw River
19875	LAR05P075		Msgp	Weyerhaeuser NR Co - Holden Wood Products	Lumber And Wood Products, Except Furniture	04/30/11	ditch to Hog Branch
23946	LAG531198	001	Treated sanitary wastewater	Bayou Railcar Services Inc	Fab. Metal Prod., Exc. Mach. And Trans. Equip.	11/30/12	local drainage to Hog Branch to Ticfaw River to Lake Maurepas to Lake Pontchartrain
27615	LAR05M812		Stormwater	Action Oil Recovery Inc	Wholesale Trade-durable Goods	04/30/11	unnamed ditch to Tickfaw River
41640	LAG530225	001	Treated sanitary wastewater	Graceland Apartment Partnership	Hotels, Camps, And Other Lodging Places	11/30/12	unnamed ditch to Yellow Water Diversion Canal to Yellow Water Creek to Natalbany River to Lake Maurepas

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
41661	LA0038243	001	Treated sanitary wastewater	Greensburg Town of - WWTP	General Agency Interest	09/30/12	dtich to Joseph Branch to Tickfaw River
43363	LAG540671	001	Treated sanitary wastewater	St Helena Central Elementary School	Educational Services	06/30/13	unnamed creek to Twelve Mile Creek to Tickfaw River
43364	LAG540672	001	Treated sanitary wastewater	St Helena Central Middle School	Educational Services	06/30/13	Creek-12 Mile Creek-Tickfaw River
74604	LAG750796	001	Exterior vehicle and equipment wash wastewater	LADOTD - Greensburg Maintenance Unit	State Agency	03/14/14	local drainage to Tickfaw River
86156	LAG490014	001	Process wastewater and process area storm water discharges	Kentwood Brick & Tile Co Inc - Greensburg Plant	Stone, Clay, Glass, And Concrete Products	01/31/15	local drainage to Hoffman Creek
101455	LAG750433	001	Treated exterior vehicle wash wastewater	A&A Car Wash	Automotive Repair, Services, And Parking	03/14/14	local drainage to Tickfaw River
111326	LAR05N421		Stormwater	LADOTD - Montpelier Maintenance Yard	Motor Freight Transportation And Warehousing	04/30/11	Bear Creek
118113	LAG541356	001	Treated sanitary wastewater	Timothy J Cutrer LLC - Salem Street Mobile Home Court - WWTP	Electric, Gas, And Sanitary Services	06/30/13	local drainage to Joseph Branch to Tickfaw River
154896	LAG532541	001	Treated sanitary wastewater	US Postal Service - Holden Post Office	Federal Agency	11/30/12	unnamed ditch to unnamed creek to Tickfaw River
163785	LAG541732	001	Treated sanitary wastewater	Bebo's Casino	Nonclassifiable Establishments	06/30/13	effluent pipe to Creek lateral to Crittendon Creek to Tickfaw River
166585	LAG533233	001	Treated sanitary wastewater	J3 Investments LLC	Building Construction	11/30/12	effluent pipe to unnamed ditch to Beaver Pond Branch to hog Branch to Tickfaw River
168124	LAR10G118		Stormwater	Abita View Apartments - Abita View Apartments LLC	Nonclassifiable Establishments	09/30/14	pipe to Abita River to Lake Ponchartrain
172997	LAR10G680		Stormwater	Pike Electric Inc.	Business Corpration	11/2/2015	Middle Colyell Creek

Table A-2. Active point source discharge permit information for 040504

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
10041	LAR05M009	001	Process wastewater, boiler blowdown, treated sanitary wastewater, and stormwater	Sanderson Farms Inc - Hammond Processing Plant	Food And Kindred Products	06/30/15	Yellow Water River
10041	LAR05M009	003	Supernate, and stormwater	Sanderson Farms Inc - Hammond Processing Plant	Food And Kindred Products	06/30/15	Yellow Water River

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
10930	LAG470289	005	Treated sanitary wastewater	Fender Mender Paint & Body Shop	Nonclassifiable Establishments	08/31/14	pipe to Highway 190 roadside ditch to Yellow Water River Branch to Yellow Water River
12026	LAG110225	003A	Stormwater and aggregate spray from sand and gravel unloading areas and stockpiles of washed sand and gravel	Rogers Ready Mix Inc	General Agency Interest	03/14/14	drainage ditch, Yellow Water Branch to Yellow Water River
12026	LAG110225	003B	Stormwater and aggregate spray from sand and gravel unloading areas and stockpiles of washed sand and gravel	Rogers Ready Mix Inc	General Agency Interest	03/14/14	ditch
12026	LAG110225	005	Treated sanitary wastewater	Rogers Ready Mix Inc	General Agency Interest	03/14/14	pipe to drainage ditch to Yellow Water River branch to Yellow Water River
12026	LAG110225	006	Washrack and shop floor washdown wastewater discharges from cement, concrete, and asphalt facilities	Rogers Ready Mix Inc	General Agency Interest	03/14/14	drainage ditch, Yellow Water Branch to Yellow Water River
19094	LAG540623	001	Treated sanitary wastewater	Rosewood Mobile Home Park	General Agency Interest	06/30/13	DITCH-CANAL-YELLOW WATER RIVER
19580	LA0077984	001	Treated sanitary wastewater	Electroless Nickel Plating of Louisiana Inc	Fab. Metal Prod., Exc. Mach. And Trans. Equip.	05/31/14	Yellow Water River
22203	LAG560076	001	Treated sanitary wastewater	Tangi Village Apartments	General Agency Interest	05/31/14	ditch to Yellow Water River and Ponchatoula River to the Tickfaw River
23688	LAG470288	005	Treated sanitary wastewater	Rocky's Body Shop	Electric, Gas, And Sanitary Services	08/31/14	effluent pipe to Yellow Water river Branch to Yellow Water River
27264	LAG533476	001	Treated sanitary wastewater	BDD LLC	Nonclassifiable Establishments	11/30/12	Unnamed drainage ditch-Yellow Water River
43482	LAG570140	001	Treated sanitary wastewater	Tangipahoa Parish Sewerage District #1 - Tillman Park Subdivision STP	Electric, Gas, And Sanitary Services	04/30/14	local drainage to Yellow Water River
68833	LAG750800	001	Exterior vehicle wash wastewater	Jeff's Grocery	General Agency Interest	03/14/14	local drainage to Yellow Water River
68833	LAG750800	002	Treated sanitary wastewater	Jeff's Grocery	General Agency Interest	03/14/14	local drainage to Yellow Water River
74009	LAG830225	001	Wastewaters associates with the cleanup of PUST sites	Former Pilot Store #80	Auto dealers and gasoline service stations	12/14/12	drainage ditch to Yellow Water River
78663	LAG750421	001	Exterior vehicle and equipment washwater	Happywoods Market & Deli	Food Stores	03/14/14	local drainage to Yellow Water Creek

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
78663	LAG750421	002	Treated sanitary wastewater	Happywoods Market & Deli	Food Stores	03/14/14	local drainage to Yellow Water Creek
83756	LAG540979	001	Treated sanitary wastewater	Mo-Dad Utilities LLC - Emerald Gardens Subdivision	Electric, Gas, And Sanitary Services	06/30/13	local drainage to Ponchatoula Creek
86149	LAG531192	001	Treated sanitary wastewater	Greco Rentals	Real Estate	11/30/12	Yellow Water Creek
86946	LAG531202	001	Treated sanitary wastewater	Stein Road Apartments	Real Estate	11/30/12	unnamed ditch to Yellow Water River
86950	LAG532178	001	Treated sanitary wastewater	Country Oaks Apartments	Real Estate	11/30/12	roadside ditch into Yellow Water River
86951	LAG541525	001	Treated sanitary wastewater	Lakeview Apartments	Real Estate	06/30/13	Parish drainage ditch-Yellow Water River
86955	LAG541467	001	Treated sanitary wastewater	Waste Water Treatment System & Operations - Yorkshire Park II	Real Estate	06/30/13	local drainage into Yellow Water River
86959	LAG531209	001	Treated sanitary wastewater	Crystal Lake Apartments	Real Estate	11/30/12	Yellow Water River
86960	LAG532168	001	Treated sanitary wastewater	Alvarez Properties LLC - Tri-Way Apartments	Real Estate	11/30/12	Roadside ditch-Yellow Water River
86971	LAG531186	001	Treated sanitary wastewater	Lingo Mobile Home Park	Real Estate	11/30/12	Yellow Water River
86972	LAG531321	001	Treated sanitary wastewater	West View Apartments	Electric, Gas, And Sanitary Services	11/30/12	roadside ditch to Yellow Water River
86974	LAG560228	001	Treated sanitary wastewater	Tangi Mobile Home Park LLC	Real Estate	05/31/14	drainage canal to Yellow Water River
86977	LAG541057	001	Treated sanitary wastewater	Sandra Apartments	Real Estate	06/30/13	Unnamed ditch-Yellow Water River
90335	LAG541044	001	Treated sanitary wastewater	Calloway RV & Campground - Calloway RV & Campground Facility	Amusement And Recreation Services	06/30/13	Yellow Water River
92403	LAG560217	001	Treated sanitary wastewater	Mo-Dad Utilities LLC - Azalea Woods Subdivision	Electric, Gas, And Sanitary Services	05/31/14	Yellow Water River to Ponchatoula Creek
93265	LAG541073	001	Treated sanitary wastewater	Chief Investments LLC - Seven Oaks Villas	Hotels, Camps, And Other Lodging Places	06/30/13	Yellow Water River
103326	LAG480295	001	Treated exterior vehicle wash wastewater	Grand Prix Car Wash	Automotive Repair, Services, And Parking	07/31/06	Local drainage-Yellow Water River
118149	LAG531561	001	Treated sanitary wastewater	R I Campground Holdings LLC	Electric, Gas, And Sanitary Services	11/30/12	roadside ditch to unnamed canal to Yellow Water River
119193	LAG531891	001	Treated sanitary wastewater	Salena Apartments	Real Estate	11/30/12	local drainage to Yellow Water River
119697	LA0119466	001	Treated sanitary wastewater	Tangipahoa Parish Sewer District # 1 - NW Hammond Treatment Facility	Nonclassifiable Establishments	08/31/11	parish drainage ditch to Yellow Water River to Lake Maurepas

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
119697	LAR10C504		Construction stormwater	Tangipahoa Parish Sewer District # 1 - NW Hammond Treatment Facility		09/30/14	parish drainage ditch to Yellow Water River to Lake Maurepas
124107	LAG541236	001	Treated sanitary wastewater	Tangipahoa Parish Sewerage District #1 - Deer Creek Subdivision WWTP - Construction	Nonclassifiable Establishments	06/30/13	Unnamed ditch-unnamed slough-Yellow Water River-Ponchatoula Creek
129865	LAG532039	001	Treated sanitary wastewater	Franjo LLC - Franjo Apartments	Nonclassifiable Establishments	11/30/12	parish drainage to Yellow Water river
129926	LAG532038	001	Treated sanitary wastewater	Hollywood Estates South Apartments	Real Estate	11/30/12	roadside ditch to unnamed creek to Yellow Water River
132753	LAG570370	001	Treated sanitary wastewater	Mo-Dad Utilities LLC - Belle Foret IV Subdivision	Electric, Gas, And Sanitary Services	03/14/09	Unnamed ditch to Yellow Water River
134307	LAG570360	001	Treated sanitary wastewater	Mo-Dad Utilities LLC - Krogen Kove - STP	Real Estate	03/14/09	Unnamed ditch-unnamed creek-Yellow Water River-Ponchatoula Creek
136841	LAG532953	001	Treated sanitary wastewater	Ruth Cook Computer & Medical Schools Inc	Electric, Gas, And Sanitary Services	11/30/12	effluent pipe to unnamed ditch to Yellow Water Creek
136842	LAG533146	001	Treated sanitary wastewater	Brandon G Thompson Funeral Home Inc	Personal Services	11/30/12	Local drainage-Yellow Water River
141207	LAG533315	001	Treated sanitary wastewater	Rosebrooks Apartments - Reliance Developments LLC	Electric, Gas, And Sanitary Services	11/30/12	effluent pipe to unnamed ditch to Yellow Water River
141218	LAG532158	001	Treated sanitary wastewater	Stanley's Apartments	Real Estate	11/30/12	ditch to roadside ditch to Yellow Water River
141264	LAG541813	001	Treated sanitary wastewater	Country Manor Apartments	Nonclassifiable Establishments	06/30/13	parish drainage ditch to Yellow Water River
141269	LAG533496	001	Treated sanitary wastewater	Starscape Inc - Twin Oaks Apartments	Nonclassifiable Establishments	11/30/12	effluent pipe to roadside ditch to parish drainage ditch to Yellow Water River
142790	LAG532151	001	Treated sanitary wastewater	Emile Joseph Mayeaux III - Magnolia Place Apartments	Real Estate	11/30/12	parish drainage ditch to unnamed ditch to Yellow Water river
142988	LAG541742	001	Treated sanitary wastewater	Pecan Grove Trailer Court PDA Brian Mayeaux - Pecan Grove Trailer Court	Nonclassifiable Establishments	06/30/13	Yellow Water Creek into Yellow Water River
149360	LAG533298	001	Treated sanitary wastewater	Hoover Family Dentistry LLC	Health Services	11/30/12	Highway ditch-unnamed tributary-Yellow Water River
149918	LAG532273	001	Treated sanitary wastewater	Eloise Tantillo - ET Apartments	Real Estate	11/30/12	unnamed dtich to unnamed creek to Yellow Water River
157747	LAR10F085		Construction stormwater	RSC Hammond - KACO Constructors LLC	Nonclassifiable Establishments	09/30/09	Yellow Water River to Ponchatoula Creek to Lake Maurepas

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
159461	LAG532959	001	Treated sanitary wastewater	Little Hands Preschool	Social Services	11/30/12	effluent pipe to unnamed ditch to Yellow Water Creek
159938	LAG541672	001	Treated sanitary wastewater	Density Utilities of Louis - Arbor Trace Subdivision Sewarge Treatment Facility	Electric, Gas, And Sanitary Services	06/30/13	unnamed ditch to parish drainage to Yellow Water river
160028	LAG533275	001	Treated sanitary wastewater	Ed's Plumbing Service	Business Services	11/30/12	local drainage to a Yellow Water River Branch
160028	LAG533275	002	Treated sanitary wastewater	Ed's Plumbing Service	Business Services	11/30/12	local drainage to a Yellow Water River Branch
161271	LAG533027	001	Treated sanitary wastewater	Magnolia Place	Electric, Gas, And Sanitary Services	11/30/12	effluent pipe to unnamed ditch to Yellow Water Creek
161673	LAG533035	001	Treated sanitary wastewater	Colton Giluso Rental Properties	Real Estate	11/30/12	unnamed ditch into Yellow Water River
162065	LAG533103	001	Treated sanitary wastewater	God's Tabernacle of Deliverance	Membership Organizations	11/30/12	roadside ditch to Yellow Water river Branch to Yellow Water river
162476	LAG533531	001	Treated sanitary wastewater	Pat Tantillo - Olivia's Place	Nonclassifiable Establishments	11/30/12	parish drainage ditch to Yellow Water river Branch to Yellow Water River
164253	LAG533434	001	Treated sanitary wastewater	190 Motel	Hotels, Camps, And Other Lodging Places	11/30/12	Effluent pipe-0.03 miles into Yellow Water River
164467	LAG533220	001	Treated sanitary wastewater	Graphics on the Spot	Printing, Publishing, And Allied Industries	11/30/12	local drainage to a Yellow Water River branch to the Yellow Water River
166506	LAG533223	001	Treated sanitary wastewater	Carter Construction Unlimited LLC - Carter's Apartment Complex	Nonclassifiable Establishments	11/30/12	Parish drainage ditch-Ponchatoula Creek-Natalbany River
166556	LAR10F900		Construction stormwater	Tri-Way Rentals II Apartments - Vic Alvarez	Nonclassifiable Establishments	02/27/15	Roadside ditch on Herbert Kyzar-roadside ditch on Wardline Road-Yellow Water River
167046	LAG533265	001	Treated sanitary wastewater	Little Debbie's Lounge	Eating And Drinking Places	11/30/12	LA Hwy 190 ditch to Yellow Water River
167277	LAG533395	001	Treated sanitary wastewater	Harold Wager - STP	Electric, Gas, And Sanitary Services	11/30/12	LA Hwy 190 ditch to Yellow Water River Branch to Yellow Water river
169070	LAG533370	001	Treated sanitary wastewater	Louisiana Real Estate Appraisers Board	Nonclassifiable Establishments	11/30/12	Effluent pipe-LA Highway 190 ditch-Yellow Water River Branch-Yellow Water River

AI	Permit #	Outfall	Outfall type	Facility name	Facility type	Expiration date	Receiving waterbody
169240	LAG533368	001	Treated sanitary wastewater	Real Estate - Notary Office - Timber Office	Nonclassifiable Establishments	11/30/12	LA HWY 190 ditch to Little Natalbany Creek to Yellow Water River to Tangipahoa River
170874	LAG533622	001	Treated sanitary wastewater	BDD LLC		11/30/12	Drainage ditch to Yellow Water River
170958	LAG533525	001	Treated sanitary wastewater	Charter Communication	Communications	11/30/12	Effluent pipe-0.06 miles into an unnamed ditch-0.16 miles into Hwy 1040 ditch-Yellow Water River
171459	LAG533513	001	Treated sanitary wastewater	SAJA LLC - The Oak Apartments	Nonclassifiable Establishments	11/30/12	Unnamed drainage ditch-Yellow Water River
171614	LAG533542	001	Treated sanitary wastewater	Home Certification Services of LA Inc	Nonclassifiable Establishments	11/30/12	roadside ditch to Yellow Water River
171884	LAG533511	001	Treated sanitary wastewater	IBC Sales Corp - Holsum Depot	Nonclassifiable Establishments	11/30/12	unnamed canal to Yellow Water River
171929	LAG533519	001	Treated sanitary wastewater	Oak Villa Apartments	Nonclassifiable Establishments	11/30/12	unnamed canal to Yellow Water River
172291	LAG541823	001	Treated sanitary wastewater	Lake View Washateria\Laundro mat	Personal Services	06/30/13	Local drainage-Yellow Water River
175843	LAG533741	001	Treated sanitary wastewater	Statewide Transportation - D&K Properties LLC		5/25/16	Drainage ditch to Yellow Water River

Table A-3. Terminated point source discharge permits for 040504

AI	Permit #	Facility name	Facility type	Expiration date
6316	LAG470297	Jones Glass & Radiator	Nonclassifiable Establishments	Terminated
22878	LAG480280	Tuthill Transfer Systems Inc	General Agency Interest	Terminated 06/01/11
27729	LAR10B224	Winn Dixie #9015	Food Stores	Terminated 06/24/2004
43484	LAG560133	Tangipahoa Parish Sewerage District #1 - Kintally STP	General Agency Interest	Terminated 1/20/06
84704	LAR10B240	Lowes of Hammond 1070	Build.Matls., Hardware, And Garden Supply	Terminated 2/17/04
86978	LAG531240	Landing Condominiums 901	Real Estate	Terminated 12/3/10
142295	LAG830226	Former Speedway Store #9049	Auto dealers and gasoline service stations	Terminated 03/27/2007
157849	LAR10F100	Kaco Inc - RSC Hammond - RS Hammond LA 1 LP	Nonclassifiable Establishments	Terminated 8/20/10
168787	LAR10G197	Hornbeck Offshore Warehouse Facility - Hornbeck Offshore Operators LLC - John S Cook	Nonclassifiable Establishments	Terminated 8/29/10

Appendix B:
TDS Water Quality Data

Table B-1. Water quality observations for LDEQ station 116 in subsegment 040501. ..... B-1
Table B-2. Water quality observations for LDEQ station 299 in subsegment 040504 ..... B-7

Table B-1. Water quality observations for LDEQ station 116 in subsegment 040501.

Site	Collection Date	Result	Units
116	4/10/1978	34	ppm
116	5/8/1978	54	ppm
116	6/12/1978	34	ppm
116	7/10/1978	12	ppm
116	8/14/1978	50	ppm
116	9/11/1978	50	ppm
116	1/8/1979	42	ppm
116	10/13/1980	26	ppm
116	12/8/1980	34	ppm
116	1/12/1981	94	ppm
116	2/9/1981	58	ppm
116	3/9/1981	42	ppm
116	4/13/1981	48	ppm
116	5/11/1981	98	ppm
116	6/8/1981	94	ppm
116	7/13/1981	40	ppm
116	8/10/1981	52	ppm
116	9/14/1981	52	ppm
116	10/12/1981	20	ppm
116	11/16/1981	64	ppm
116	12/14/1981	26	ppm
116	1/11/1982	82	ppm
116	2/8/1982	78	ppm
116	3/8/1982	80	ppm
116	4/13/1982	56	ppm
116	5/11/1982	60	ppm
116	6/15/1982	67	ppm
116	8/10/1982	58	ppm
116	9/15/1982	49	ppm
116	10/11/1982	43	ppm
116	11/15/1982	45.5	ppm
116	12/14/1982	96	ppm
116	1/11/1983	43	ppm
116	2/7/1983	84	ppm
116	4/12/1983	67	ppm
116	5/9/1983	50	ppm
116	6/13/1983	69	ppm
116	7/11/1983	62	ppm
116	8/8/1983	80	ppm
116	9/12/1983	42	ppm
116	10/10/1983	61	ppm
116	11/14/1983	56	ppm
116	12/12/1983	38	ppm
116	1/9/1984	50	ppm
116	2/13/1984	100	ppm
116	3/14/1984	68	ppm
116	4/9/1984	110	ppm
116	5/14/1984	52	ppm

Site	Collection Date	Result	Units
116	7/9/1984	58	ppm
116	9/10/1984	47	ppm
116	10/9/1984	56	ppm
116	11/13/1984	34	ppm
116	12/10/1984	58	ppm
116	1/14/1985	64	ppm
116	2/11/1985	113	ppm
116	3/11/1985	112	ppm
116	4/8/1985	71	ppm
116	5/13/1985	16	ppm
116	6/10/1985	35	ppm
116	7/8/1985	63	ppm
116	8/12/1985	62	ppm
116	9/9/1985	102	ppm
116	10/14/1985	50	ppm
116	12/9/1985	78	ppm
116	1/13/1986	84	ppm
116	2/18/1986	82	ppm
116	3/18/1986	62	ppm
116	4/15/1986	24	ppm
116	5/13/1986	30	ppm
116	7/15/1986	64	ppm
116	8/12/1986	40	ppm
116	9/9/1986	70	ppm
116	11/17/1986	88	ppm
116	12/8/1986	34	ppm
116	1/12/1987	66	ppm
116	2/16/1987	102	ppm
116	3/9/1987	18	ppm
116	4/13/1987	24	ppm
116	5/11/1987	90	ppm
116	7/13/1987	81	ppm
116	8/10/1987	87	ppm
116	9/14/1987	54	ppm
116	10/12/1987	30	ppm
116	11/16/1987	86	ppm
116	12/14/1987	35	ppm
116	1/11/1988	73	ppm
116	2/8/1988	66	ppm
116	3/14/1988	58	ppm
116	4/11/1988	62	ppm
116	5/9/1988	60	ppm
116	6/13/1988	58	ppm
116	7/11/1988	44	ppm
116	9/12/1988	42	ppm
116	10/10/1988	50	ppm
116	11/14/1988	56	ppm
116	12/12/1988	90	ppm
116	1/9/1989	130	ppm

Site	Collection Date	Result	Units
116	2/13/1989	54	ppm
116	4/10/1989	80	ppm
116	5/8/1989	82	ppm
116	6/13/1989	68	ppm
116	7/11/1989	66	ppm
116	8/15/1989	50	ppm
116	9/12/1989	38	ppm
116	10/9/1989	78	ppm
116	11/13/1989	96	ppm
116	12/11/1989	24	ppm
116	1/8/1990	114	ppm
116	2/12/1990	76	ppm
116	3/12/1990	57	ppm
116	4/9/1990	78	ppm
116	5/14/1990	50	ppm
116	6/11/1990	68	ppm
116	7/9/1990	39	ppm
116	8/13/1990	57	ppm
116	9/10/1990	94	ppm
116	10/15/1990	47	ppm
116	11/13/1990	74	ppm
116	12/10/1990	34	ppm
116	1/14/1991	68	ppm
116	3/11/1991	58	ppm
116	5/13/1991	88	ppm
116	7/15/1991	82	ppm
116	9/9/1991	62	ppm
116	11/18/1991	64	ppm
116	1/6/1992	68	ppm
116	3/9/1992	14	ppm
116	5/11/1992	60	ppm
116	9/14/1992	62	ppm
116	11/16/1992	74	ppm
116	1/11/1993	86.1	ppm
116	3/8/1993	58	ppm
116	5/10/1993	62	ppm
116	7/12/1993	108	ppm
116	11/15/1993	80	ppm
116	1/10/1994	96	ppm
116	3/15/1994	64	ppm
116	5/9/1994	82	ppm
116	7/12/1994	94	ppm
116	9/13/1994	76	ppm
116	11/15/1994	4	ppm
116	1/10/1995	120	ppm
116	3/14/1995	106	ppm
116	5/8/1995	58	ppm
116	7/11/1995	34	ppm
116	9/11/1995	34	ppm

Site	Collection Date	Result	Units
116	11/13/1995	50	ppm
116	1/9/1996	92	ppm
116	3/11/1996	10	ppm
116	5/13/1996	2	ppm
116	7/8/1996	120	ppm
116	9/9/1996	96	ppm
116	11/18/1996	98.1	ppm
116	1/6/1997	78	ppm
116	5/12/1997	66.1	ppm
116	9/8/1997	42.1	ppm
116	11/17/1997	42	ppm
116	1/13/1998	128	ppm
116	3/9/1998	92	ppm
116	5/11/1998	28.1	ppm
116	6/8/1998	47.9	ppm
116	7/13/1998	280	ppm
116	8/10/1998	24	ppm
116	9/14/1998	54	ppm
116	10/12/1998	124	ppm
116	11/16/1998	38	ppm
116	12/14/1998	50	ppm
116	1/12/1999	52	ppm
116	2/9/1999	43.9	ppm
116	3/9/1999	156	ppm
116	4/13/1999	60.1	ppm
116	5/11/1999	11.9	ppm
116	6/15/1999	45	ppm
116	7/13/1999	67	ppm
116	8/10/1999	98	ppm
116	9/14/1999	44	ppm
116	10/12/1999	92	ppm
116	11/8/1999	27	ppm
116	12/6/1999	27.5	ppm
116	1/3/2000	34	ppm
116	2/8/2000	29	ppm
116	3/14/2000	32	ppm
116	4/11/2000	64	ppm
116	5/9/2000	38	ppm
116	6/13/2000	36	ppm
116	7/11/2000	47	ppm
116	8/8/2000	39	ppm
116	9/12/2000	39	ppm
116	10/10/2000	34	ppm
116	10/31/2000	35	ppm
116	1/9/2001	52.7	ppm
116	2/13/2001	84	ppm
116	3/13/2001	56	ppm
116	4/9/2001	53.3	ppm
116	6/12/2001	54.7	ppm

Site	Collection Date	Result	Units
116	7/17/2001	70	ppm
116	8/14/2001	62.5	ppm
116	9/10/2001	55.3	ppm
116	10/9/2001	44.7	ppm
116	11/6/2001	39.3	ppm
116	12/3/2001	47.3	ppm
116	4/9/2002	64.7	ppm
116	6/11/2002	47.3	ppm
116	3/19/2002	51.3	ppm
116	2/19/2002	38.7	ppm
116	5/14/2002	39.3	ppm
116	1/8/2002	67.3	ppm
116	10/14/2002	50	ppm
116	9/17/2002	38	ppm
116	1/21/2003	33.3	ppm
116	11/18/2002	47.3	ppm
116	12/9/2002	67.3	ppm
116	5/20/2003	35.3	ppm
116	8/13/2002	67.3	ppm
116	7/22/2003	61.3	ppm
116	2/18/2003	73.3	ppm
116	3/25/2003	52	ppm
116	9/23/2003	46	ppm
116	8/19/2003	48	ppm
116	4/22/2003	47.3	ppm
116	10/21/2003	47.3	ppm
116	12/16/2003	12	ppm
116	11/18/2003	36.7	ppm
116	6/24/2003	78	ppm
116	4/13/2004	52	ppm
116	3/9/2004	62	ppm
116	5/4/2004	76	ppm
116	1/6/2004	67.3	ppm
116	2/9/2004	80.7	ppm
116	7/27/2004	53.3	ppm
116	6/2/2004	64.7	ppm
116	6/29/2004	62	ppm
116	11/16/2004	45.3	ppm
116	2/2/2005	76	ppm
116	1/11/2005	70.7	ppm
116	8/24/2004	45.3	ppm
116	10/5/2004	41.3	ppm
116	10/19/2004	42.7	ppm
116	4/5/2005	64.7	ppm
116	7/9/2007	71.3	mg/L
116	3/1/2005	63.3	ppm
116	5/3/2005	48.7	ppm
116	6/7/2005	67.3	ppm
116	6/28/2005	48.7	ppm

Site	Collection Date	Result	Units
116	7/12/2005	55.3	ppm
116	8/2/2005	61.3	ppm
116	6/10/1986	64	ppm
116	9/13/1993	78	ppm
116	1/10/2006	46	ppm
116	3/7/2006	58	ppm
116	3/21/2006	43.3	ppm
116	4/4/2006	46.7	ppm
116	2/7/2006	80.7	ppm
116	4/18/2006	39.3	ppm
116	5/1/2006	72.7	ppm
116	5/24/2006	40.7	ppm
116	7/16/2002	42.6	ppm
116	3/14/1983	73	ppm
116	3/14/1989	55	ppm
116	7/14/1997	79.9	ppm
116	7/31/2006	45.3	ppm
116	12/5/2000	53	ppm
116	7/13/1982	98	ppm
116	11/18/1985	64	ppm
116	8/8/1988	54	ppm
116	7/13/1992	90	ppm
116	3/10/1997	94	ppm
116	11/15/2006	72	mg/L
116	9/6/2006	42.7	mg/L
116	12/18/2006	44	mg/L
116	1/29/2007	76.7	mg/L
116	2/2/2010	102	mg/L
116	4/30/2007	60.7	mg/L
116	4/9/2007	52.7	mg/L
116	5/21/2007	48.7	mg/L
116	6/11/2007	46	mg/L
116	2/26/2007	50	mg/L
116	3/19/2007	49.3	mg/L
116	9/17/2007	52.7	mg/L
116	10/30/2007	52.7	mg/L
116	10/1/2007	40	mg/L
116	8/13/2007	50.7	mg/L
116	12/19/2007	41.3	mg/L
116	7/23/2007	66.7	mg/L
116	1/17/2008	84.7	mg/L
116	11/28/2007	34.7	mg/L
116	3/26/2008	40.7	mg/L
116	4/29/2008	33.3	mg/L
116	2/26/2008	70.7	mg/L
116	5/28/2008	49.3	mg/L
116	6/24/2008	42.7	mg/L
116	8/26/2008	60.7	mg/L
116	10/9/2008	41.3	mg/L

Site	Collection Date	Result	Units
116	11/18/2008	36.7	mg/L
116	7/29/2008	38.7	mg/L
116	4/14/2009	105	mg/L
116	12/9/2008	36	mg/L
116	6/9/2009	47.5	mg/L
116	9/22/2009	47.5	mg/L
116	3/10/2009	60	mg/L
116	8/11/2009	57.5	mg/L
116	5/12/2009	65	mg/L
116	7/14/2009	45	mg/L
116	1/13/2009	70.7	mg/L
116	2/10/2009	46	mg/L
116	1/5/2010	65	mg/L
116	10/6/2009	97.5	mg/L
116	11/3/2009	57.5	mg/L
116	12/1/2009	20	mg/L
116	6/8/2010	50	mg/L
116	7/13/2010	22.5	mg/L
116	4/6/2010	25	mg/L
116	5/4/2010	10	mg/L
116	10/5/2010	15	mg/L
116	9/7/2010	30	mg/L
116	8/10/2010	87.5	mg/L

Table B-2. Water quality observations for LDEQ station 299 in subsegment 040504

Site	Collection Date	Result	Units
299	1/12/1998	162	ppm
299	3/9/1998	136	ppm
299	5/11/1998	138	ppm
299	6/29/1998	256	ppm
299	1/9/2001	216	ppm
299	2/13/2001	161	ppm
299	3/13/2001	88	ppm
299	4/9/2001	182	ppm
299	5/8/2001	494	ppm
299	6/12/2001	110	ppm
299	8/14/2001	142	ppm
299	9/10/2001	108	ppm
299	10/9/2001	194	ppm
299	11/6/2001	205	ppm
299	12/3/2001	177	ppm
299	1/14/1991	114	ppm
299	3/11/1991	222	ppm
299	5/13/1991	142	ppm
299	7/15/1991	254	ppm
299	9/9/1991	202	ppm
299	11/18/1991	346	ppm
299	1/6/1992	344	ppm
299	3/9/1992	94	ppm

Site	Collection Date	Result	Units
299	5/12/1992	184	ppm
299	7/13/1992	218	ppm
299	9/14/1992	208	ppm
299	11/17/1992	202	ppm
299	1/11/1993	118	ppm
299	3/8/1993	134	ppm
299	5/10/1993	184	ppm
299	7/12/1993	140	ppm
299	9/13/1993	260	ppm
299	11/15/1993	240	ppm
299	1/10/1994	234	ppm
299	3/15/1994	176	ppm
299	5/9/1994	164	ppm
299	9/13/1994	178	ppm
299	11/15/1994	256	ppm
299	1/10/1995	194	ppm
299	3/13/1995	136	ppm
299	5/8/1995	192	ppm
299	7/11/1995	198	ppm
299	9/11/1995	232	ppm
299	11/13/1995	168	ppm
299	1/9/1996	286	ppm
299	3/11/1996	318	ppm
299	7/8/1996	242	ppm
299	9/9/1996	256	ppm
299	11/18/1996	234	ppm
299	1/6/1997	208	ppm
299	3/10/1997	178	ppm
299	5/12/1997	166	ppm
299	7/14/1997	104	ppm
299	9/8/1997	246	ppm
299	11/17/1997	178	ppm
299	5/13/1996	122	ppm
299	3/7/2006	20	ppm
299	3/21/2006	247	ppm
299	2/7/2006	179	ppm
299	1/10/2006	281	ppm
299	4/18/2006	294	ppm
299	5/1/2006	134	ppm
299	5/24/2006	314	ppm
299	4/4/2006	236	ppm
299	7/31/2006	192	ppm
299	7/12/1994	120	ppm
299	7/17/2001	179	ppm
299	11/15/2006	140	mg/L
299	9/6/2006	334	mg/l
299	12/18/2006	300	mg/L
299	2/2/2010	175	mg/L
299	1/5/2010	158	mg/L

Site	Collection Date	Result	Units
299	10/6/2009	132	mg/L
299	11/3/2009	145	mg/L
299	12/1/2009	145	mg/L
299	3/2/2010	120	mg/L
299	6/8/2010	110	mg/L
299	7/13/2010	108	mg/L
299	5/4/2010	168	mg/L
299	4/6/2010	182	mg/L
299	9/7/2010	152	mg/L
299	8/10/2010	160	mg/L

APPENDIX C:
TDS TMDL Calculation for Subsegments 040501 and 040504 in the Lake Pontchartrain Basin

Table C-1. TDS concentrations before and after reductions for subsegment 040501 station 116 .....C-2
Table C-2. TDS TMDL summary table for subsegment 040501 .....C-2
Table C-3. TDS concentrations before and after reductions for subsegment 040504 station 299 .....C-3
Table C-4. TDS TMDL summary table for subsegment 040504 .....C-5

Table C-1. TDS concentrations before and after reductions for subsegment 040501 station 116

Date	TDS concentration before reduction (mg/L)	TDS concentration after reduction (mg/L)	TDS loading before reduction (lb/d)	TDS loading after reduction (lb/d)
4/10/1978	34	6.679	158,080.028	31,051.434
5/8/1978	54	10.607	251,068.280	49,316.983
6/12/1978	34	6.679	158,080.028	31,051.434
7/10/1978	12	2.357	55,792.951	10,959.330
8/14/1978	50	9.821	232,470.630	45,663.873
9/11/1978	50	9.821	232,470.630	45,663.873
Most of the cells in this spreadsheet have been hidden for brevity.				
2/10/2009	46	9.036	213,872.979	42,010.763
1/5/2010	65	12.768	302,211.818	59,363.035
10/6/2009	97.5	19.152	453,317.728	89,044.552
11/3/2009	57.5	11.295	267,341.224	52,513.454
12/1/2009	20	3.929	92,988.252	18,265.549
6/8/2010	50	9.821	232,470.630	45,663.873
7/13/2010	22.5	4.420	104,611.783	20,548.743
4/6/2010	25	4.911	116,235.315	22,831.937
5/4/2010	10	1.964	46,494.126	9,132.775
10/5/2010	15	2.946	69,741.189	13,699.162
9/7/2010	30	5.893	139,482.378	27,398.324
8/10/2010	87.5	17.187	406,823.602	79,911.778

Table C-2. TDS TMDL summary table for subsegment 040501

Average water budget (mm/day)		2.509
Subsegment area (acres)		207,706
Calculated flow (cfs)		862.0
Criterion (mg/L)		55.0
Criterion as loading (lb/d)		255,718
Wasteload allocation (lb/d)		271.99
Percent reduction		80.4
Point source flow (MGD)		0.59
	Before reduction	After reduction
Average concentration (mg/L)	59.43	11.67
Average loading (lb/d)	276,298.7	54,273
TMDL (lb/d)	255,989.7	255,989.7

Table C-3. TDS concentrations before and after reductions for subsegment 040504 station 299

Date	TDS concentration before reduction (mg/L)	TDS concentration after reduction (mg/L)	TDS loading before reduction (lb/d)	TDS loading after reduction (lb/d)
1/12/1998	162	49.2	40,034	12,156
3/9/1998	136	41.3	33,609	10,205
5/11/1998	138	41.9	34,103	10,355
6/29/1998	256	77.7	63,264	19,210
1/9/2001	216	65.6	53,379	16,208
2/13/2001	161	48.9	39,787	12,081
3/13/2001	88	26.7	21,747	6,603
4/9/2001	182	55.3	44,977	13,657
5/8/2001	494	150.0	122,080	37,069
6/12/2001	110	33.4	27,184	8,254
8/14/2001	142	43.1	35,092	10,655
9/10/2001	108	32.8	26,690	8,104
10/9/2001	194	58.9	47,943	14,557
11/6/2001	205	62.2	50,661	15,383
12/3/2001	177	53.7	43,741	13,282
1/14/1991	114	34.6	28,172	8,554
3/11/1991	222	67.4	54,862	16,659
5/13/1991	142	43.1	35,092	10,655
7/15/1991	254	77.1	62,770	19,060
9/9/1991	202	61.3	49,920	15,158
11/18/1991	346	105.1	85,506	25,963
1/6/1992	344	104.5	85,011	25,813
3/9/1992	94	28.5	23,230	7,054
5/12/1992	184	55.9	45,471	13,807
7/13/1992	218	66.2	53,874	16,358
9/14/1992	208	63.2	51,402	15,608
11/17/1992	202	61.3	49,920	15,158
1/11/1993	118	35.8	29,161	8,855
3/8/1993	134	40.7	33,115	10,055
5/10/1993	184	55.9	45,471	13,807
7/12/1993	140	42.5	34,598	10,505
9/13/1993	260	78.9	64,253	19,510
11/15/1993	240	72.9	59,310	18,009
1/10/1994	234	71.1	57,828	17,559
3/15/1994	176	53.4	43,494	13,207
5/9/1994	164	49.8	40,529	12,306
9/13/1994	178	54.0	43,988	13,357
11/15/1994	256	77.7	63,264	19,210
1/10/1995	194	58.9	47,943	14,557
3/13/1995	136	41.3	33,609	10,205
5/8/1995	192	58.3	47,448	14,407
7/11/1995	198	60.1	48,931	14,858
9/11/1995	232	70.4	57,333	17,409
11/13/1995	168	51.0	41,517	12,606

Date	TDS concentration before reduction (mg/L)	TDS concentration after reduction (mg/L)	TDS loading before reduction (lb/d)	TDS loading after reduction (lb/d)
1/9/1996	286	86.8	70,678	21,461
3/11/1996	318	96.6	78,586	23,862
7/8/1996	242	73.5	59,805	18,159
9/9/1996	256	77.7	63,264	19,210
11/18/1996	234	71.1	57,828	17,559
1/6/1997	208	63.2	51,402	15,608
3/10/1997	178	54.0	43,988	13,357
5/12/1997	166	50.4	41,023	12,456
7/14/1997	104	31.6	25,701	7,804
9/8/1997	246	74.7	60,793	18,459
11/17/1997	178	54.0	43,988	13,357
5/13/1996	122	37.0	30,149	9,155
3/7/2006	20	6.1	4,943	1,501
3/21/2006	247	75.0	61,040	18,534
2/7/2006	179	54.4	44,236	13,432
1/10/2006	281	85.3	69,442	21,086
4/18/2006	294	89.3	72,655	22,061
5/1/2006	134	40.7	33,115	10,055
5/24/2006	314	95.3	77,598	23,562
4/4/2006	236	71.7	58,322	17,709
7/31/2006	192	58.3	47,448	14,407
7/12/1994	120	36.4	29,655	9,005
7/17/2001	179	54.4	44,236	13,432
11/15/2006	140	42.5	34,598	10,505
9/6/2006	334	101.4	82,540	25,063
12/18/2006	300	91.1	74,138	22,512
2/2/2010	175	53.1	43,247	13,132
1/5/2010	158	48.0	39,046	11,856
10/6/2009	132	40.1	32,621	9,905
11/3/2009	145	44.0	35,833	10,881
12/1/2009	145	44.0	35,833	10,881
3/2/2010	120	36.4	29,655	9,005
6/8/2010	110	33.4	27,184	8,254
7/13/2010	108	32.8	26,690	8,104
5/4/2010	168	51.0	41,517	12,606
4/6/2010	182	55.3	44,977	13,657
9/7/2010	152	46.2	37,563	11,406
8/10/2010	160	48.6	39,540	12,006

Table C-4. TDS TMDL summary table for subsegment 040504

Average water budget (mm/day)		2.509
Subsegment area (acres)		11,040
Calculated flow (cfs)		45.8
Criterion (mg/L)		150.0
Criterion as loading (lb/d)		37,069
Wasteload allocation (lb/d)		2,892
Percent reduction		69.6
Point source flow (MGD)		2.31
	Before reduction	After reduction
Average concentration (mg/L)	192.27	58.38
Average loading (lb/d)	47,514.6	14,427.49
TMDL (lb/d)	39,961.07	39,961.07

APPENDIX D:
TDS Wasteload Allocations for Point Sources in Subsegments 040501 and 040504 in the Lake Pontchartrain Basin

Table D-1. WLAs for active point source discharge permits in subsegment 040501 .....D-1
Table D-2. WLAs for active point source discharge permits in subsegment 040504 .....D-1

Table D-1. WLAs for active point source discharge permits in subsegment 040501

AI	Permit #	Facility name	Outfall	Flow type	Flow (gpd)	TDS WQ target (mg/L)	TDS (lb/d)
71	LA0111724	Gulf South Pipeline Co LP - Montpelier Compressor Station	002	Expected	1,410	55	0.647
2961	LA0121398	MCM Plastics Inc - Sterling Inc	001	Expected	1,440	55	0.661
6858	LA0051969	Griffin Industries Inc	001	Expected	17,000	55	7.803
18184	LAG540479	Holden High School	001	Expected	12,040	55	5.526
19437	LA0039179	Livingston Town of - Sewage District Plant #1	001	Design	300,000	55	137.699
19872	LA0071137	Amerchol Corp	001	Average	44,000	55	20.196
19872	LA0071137	Amerchol Corp	002	Average	50,000	55	22.950
19875	LA0056421	Weyerhaeuser NR Co - Holden Wood Products	001	Expected	2,100	55	0.964
19875	LA0056421	Weyerhaeuser NR Co - Holden Wood Products	001	Expected	2,800	55	1.285
19875	LAR05P075	Weyerhaeuser NR Co - Holden Wood Products		Not found		55	
23946	LAG531198	Bayou Railcar Services Inc	001	Expected	500	55	0.229
27615	LAR05M812	Action Oil Recovery Inc		Not found		55	
41640	LAG530225	Graceland Apartment Partnership	001	Expected	3,600	55	1.652
41661	LA0038243	Greensburg Town of - WWTP	001	Design	90,000	55	41.310
43363	LAG540671	St Helena Central Elementary School	001	Expected	12,885	55	5.914
43364	LAG540672	St Helena Central Middle School	001	Expected	11,200	55	5.141
74604	LAG750796	LADOTD - Greensburg Maintenance Unit	001	Not found		55	
84111	LAG541058	Lucky Magnolia Truck Plaza & Casino	001	Expected	10,000	55	4.590
86156	LAG490014	Kentwood Brick & Tile Co Inc - Greensburg Plant	001	Not found		55	
101455	LAG750433	A&A Car Wash	001	Not found		55	
111326	LAR05N421	LADOTD - Montpelier Maintenance Yard		Not found		55	
118113	LAG541356	Timothy J Cutrer LLC - Salem Street Mobile Home Court - WWTP	001	Expected	7,500	55	3.442
154896	LAG532541	US Postal Service - Holden Post Office	001	Expected	160	55	0.073
163785	LAG541732	Bebo's Casino	001	Design	11,000	55	5.049
166585	LAG533233	J3 Investments LLC	001	Expected	3,200	55	1.469
168124	LAR10G118	Abita View Apartments - Abita View Apartments LLC		Not found		55	
172997	LAR10G680	Pike Electric Inc.	001	Not found		55	

Table D-2. WLAs for active point source discharge permits in subsegment 040504

AI	Permit #	Facility name	Outfall	Flow type	Flow (gpd)	TDS WQ target (mg/L)	TDS (lb/d)
10041	LAR05M009	Sanderson Farms Inc - Hammond Processing Plant	001	Average	1,500,000	150	1,878
10041	LAR05M009	Sanderson Farms Inc - Hammond Processing Plant	003	Average	22,000	150	27.540
10930	LAG470289	Fender Mender Paint & Body Shop	005	DMR	200	150	0.250
12026	LAG110225	Rogers Ready Mix Inc	003A	Not found		150	
12026	LAG110225	Rogers Ready Mix Inc	003B	Not found		150	
12026	LAG110225	Rogers Ready Mix Inc	005	Design	500	150	0.626
12026	LAG110225	Rogers Ready Mix Inc	006	Not found		150	
19094	LAG540623	Rosewood Mobile Home Park	001	DMR	33,120	150	41.460
19580	LA0077984	Electroless Nickel Plating of Louisiana Inc	001	Average	350	150	0.438
22203	LAG560076	Tangi Village Apartments	001	Average	27,500	150	34.425

AI	Permit #	Facility name	Outfall	Flow type	Flow (gpd)	TDS WQ target (mg/L)	TDS (lb/d)
23688	LAG470288	Rocky's Body Shop	005	DMR	110	150	0.138
27264	LAG533476	BDD LLC	001	Average	40	150	0.050
43482	LAG570140	Tangipahoa Parish Sewerage District #1 - Tillman Park Subdivision STP	001	Design	50,000	150	62.591
68833	LAG750800	Jeff's Grocery	001	Expected	300	150	0.376
68833	LAG750800	Jeff's Grocery	002	Expected	957	150	1.198
74009	LAG830225	Former Pilot Store #80	001	Average	4,300	150	5.383
78663	LAG750421	Happywoods Market & Deli	001	Not found		150	
78663	LAG750421	Happywoods Market & Deli	002	DMR	1,549	150	1.939
83756	LAG540979	Mo-Dad Utilities LLC - Emerald Gardens Subdivision	001	Design	25,000	150	31.295
86149	LAG531192	Greco Rentals	001	Expected	1,600	150	2.003
86946	LAG531202	Stein Road Apartments	001	Expected	1,200	150	1.502
86950	LAG532178	Country Oaks Apartments	001	Expected	1,750	150	2.191
86951	LAG541525	Lakeview Apartments	001	Average	10,300	150	12.894
86955	LAG541467	Waste Water Treatment System & Operations - Yorkshire Park II	001	Expected	18,000	150	22.533
86959	LAG531209	Crystal Lake Apartments	001	Average	3,000	150	3.755
86960	LAG532168	Alvarez Properties LLC - Tri-Way Apartments	001	Average	4,500	150	5.633
86971	LAG531186	Lingo Mobile Home Park	001	Expected	1,800	150	2.253
86972	LAG531321	West View Apartments	001	Expected	3,500	150	4.381
86974	LAG560228	Tangi Mobile Home Park LLC	001	Average	40,500	150	50.698
86977	LAG541057	Sandra Apartments	001	Average	6,300	150	7.886
90335	LAG541044	Calloway RV & Campground - Calloway RV & Campground Facility	001	Average	9,950	150	12.456
92403	LAG560217	Mo-Dad Utilities LLC - Azalea Woods Subdivision	001	Expected	36,800	150	46.067
93265	LAG541073	Chief Investments LLC - Seven Oaks Villas	001	Average	8,550	150	10.703
103326	LAG480295	Grand Prix Car Wash	001	Expected	500	150	0.626
118149	LAG531561	R I Campground Holdings LLC	001	Expected	2,400	150	3.004
119193	LAG531891	Salena Apartments	001	Design	2,500	150	3.130
119697	LA0119466	Tangipahoa Parish Sewer District # 1 - NW Hammond Treatment Facility	001	Design	300,000	150	375.54
119697	LAR10C504	Tangipahoa Parish Sewer District # 1 - NW Hammond Treatment Facility		Not found		150	
124107	LAG541236	Tangipahoa Parish Sewerage District #1 - Deer Creek Subdivision WWTP - Construction	001	Average	8,800	150	11.016
129865	LAG532039	Franjo LLC - Franjo Apartments	001	Design	3,000	150	3.755
129926	LAG532038	Hollywood Estates South Apartments	001	Expected	1,500	150	1.878
132753	LAG570370	Mo-Dad Utilities LLC - Belle Foret IV Subdivision	001	Average	69,600	150	87.126
134307	LAG570360	Mo-Dad Utilities LLC - Krogen Kove - STP	001	Average	31,600	150	39.557
136841	LAG532953	Ruth Cook Computer & Medical Schools Inc	001	Design	1,000	150	1.252
136842	LAG533146	Brandon G Thompson Funeral Home Inc	001	Design	1,500	150	1.878
141207	LAG533315	Rosebrooks Apartments - Reliance Developments LLC	001	Design	3,000	150	3.755
141218	LAG532158	Stanley's Apartments	001	Expected	1,650	150	2.065
141264	LAG541813	Country Manor Apartments	001	Expected	10,450	150	13.081
141269	LAG533496	Starscape Inc - Twin Oaks Apartments	001	Expected	3,000	150	3.755
142790	LAG532151	Emile Joseph Mayeaux III - Magnolia Place Apartments	001	Expected	3,600	150	4.507

AI	Permit #	Facility name	Outfall	Flow type	Flow (gpd)	TDS WQ target (mg/L)	TDS (lb/d)
142988	LAG541742	Pecan Grove Trailer Court PDA Brian Mayeaux - Pecan Grove Trailer Court	001	Average	6,800	150	8.512
149360	LAG533298	Hoover Family Dentistry LLC	001	Design	1,500	**150**	1.878
149918	LAG532273	Eloise Tantillo - ET Apartments	001	Design	5,000	150	6.259
157747	LAR10F085	RSC Hammond - KACO Constructors LLC		Not found		150	
159461	LAG532959	Little Hands Preschool	001	Expected	1,070	150	1.339
159938	LAG541672	Density Utilities of Louis - Arbor Trace Subdivision Sewarge Treatment Facility	001	Expected	10,400	150	13.019
160028	LAG533275	Ed's Plumbing Service	001	Average	400	150	0.501
160028	LAG533275	Ed's Plumbing Service	002	Average	500	150	0.626
161271	LAG533027	Magnolia Place	001	Design	1,000	150	1.252
161673	LAG533035	Colton Giluso Rental Properties	001	Average	2,500	150	3.130
162065	LAG533103	God's Tabernacle of Deliverance	001	Expected	610	150	0.764
162476	LAG533531	Pat Tantillo - Olivia's Place	001	Design	2,500	150	3.130
164253	LAG533434	190 Motel	001	Average	1,640	**150**	2.053
164467	LAG533220	Graphics on the Spot	001	Expected	440	150	0.551
166506	LAG533223	Carter Construction Unlimited LLC - Carter's Apartment Complex	001	Average	1,200	**150**	1.502
166556	LAR10F900	Tri-Way Rentals II Apartments - Vic Alvarez		Not found		150	
167046	LAG533265	Little Debbie's Lounge	001	Expected	875	150	1.095
167277	LAG533395	Harold Wager - STP	001	Design	1,000	150	1.252
169070	LAG533370	Louisiana Real Estate Appraisers Board	001	Average	20	**150**	0.025
169240	LAG533368	Real Estate - Notary Office - Timber Office	001	Average	40	150	0.050
170874	LAG533622	BDD LLC	001	Average	700	150	0.876
170958	LAG533525	Charter Communication	001	Average	40	**150**	0.050
171459	LAG533513	SAJA LLC - The Oak Apartments	001	Average	1,200	**150**	1.502
171614	LAG533542	Home Certification Services of LA Inc	001	Average	60	150	0.075
171884	LAG533511	IBC Sales Corp - Holsum Depot	001	Average	180	150	0.225
171929	LAG533519	Oak Villa Apartments	001	Design	4,000	150	5.007
172291	LAG541823	Lake View Washateria Laundromat	001	Average	8,400	**150**	10.515
175843	LAG533741	Statewide Transportation - D&K Properties LLC	001	Average	500	150	0.626

Red bold target = existing permit limit