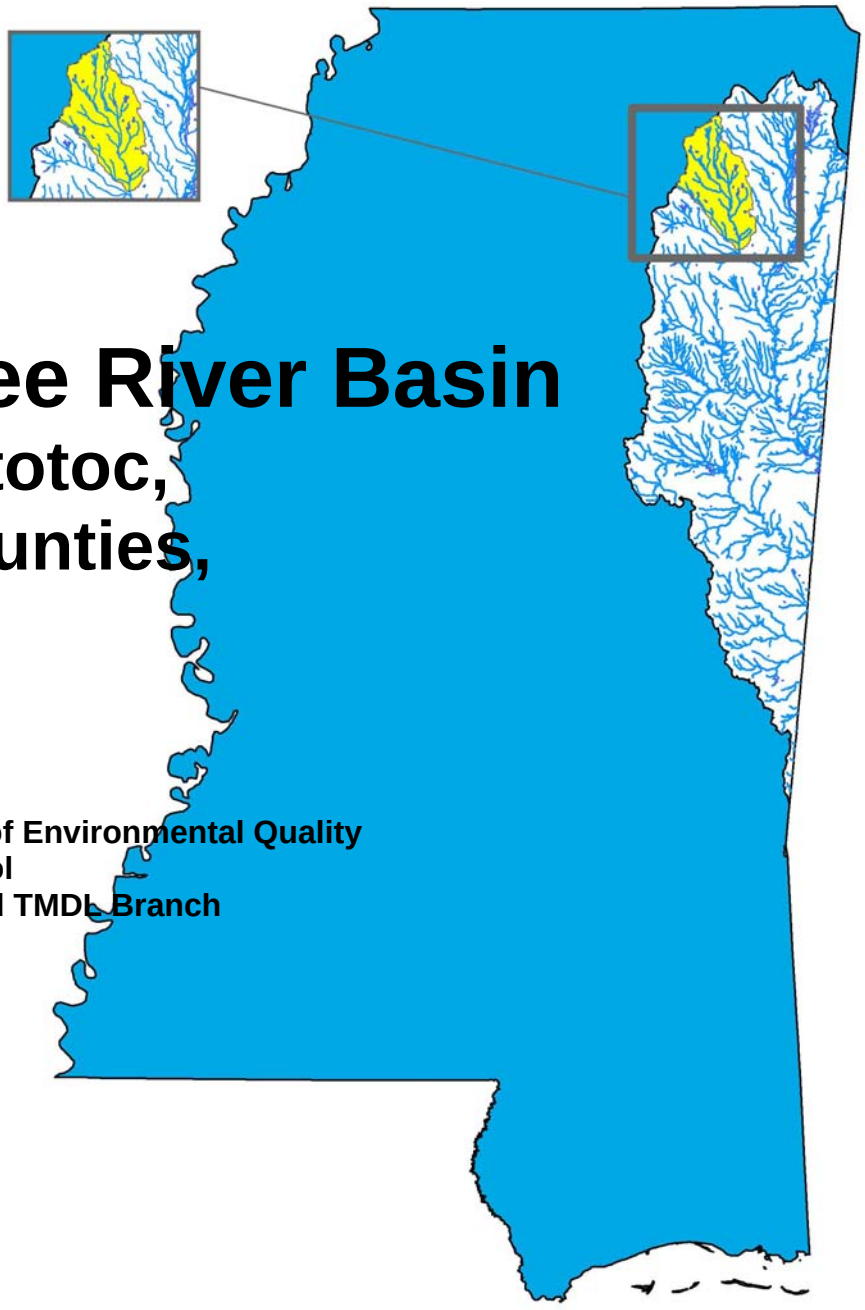
FINAL REPORT
October 2009

Nutrient Total Maximum Daily Load

For

Town Creek



Tombigbee River Basin

Union, Pontotoc, and Lee Counties, Mississippi

Prepared By

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FOREWORD

The report contains one or more Total Maximum Daily Loads (TMDLs) for water body segments found on Mississippi's current Section 303(d) List of Impaired Water Bodies. The implementation of the TMDLs contained herein will be prioritized within Mississippi's rotating basin approach.

As additional information becomes available, the TMDLs may be updated. Such additional information may include water quality and quantity data, changes in pollutant loadings, modifications to the water quality standards or criteria, or changes in landuse within the watershed. In some cases, additional water quality data may indicate that no impairment exists.

Conversion Factors

To convert from	To	Multiply by	To convert from	To	Multiply by
$mile^2$	acre	640	acre	ft^2	43560
km^2	acre	247.1	days	seconds	86400
m^3	ft^3	35.3	meters	feet	3.28
ft^3	gallons	7.48	ft^3	gallons	7.48
ft^3	liters	28.3	hectares	acres	2.47
cfs	gal/min	448.8	miles	meters	1609.3
cfs	MGD	0.646	tonnes	tons	1.1
m^3	gallons	264.2	µg/l * cfs	gm/day	2.45
m^3	liters	1000	µg/l * MGD	gm/day	3.79

Fraction	Prefix	Symbol	Multiple	Prefix	Symbol
10^{-1}	deci	d	10	deka	da
10^{-2}	centi	c	10^2	hecto	h
10^{-3}	milli	m	10^3	kilo	k
10^{-6}	micro	µ	10^6	mega	M
10^{-9}	nano	n	10^9	giga	G
10^{-12}	pico	p	10^{12}	tera	T
10^{-15}	femto	f	10^{15}	peta	P
10^{-18}	atto	a	10^{18}	exa	E

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Table 1. Listing Information

Name	ID	County	HUC	Evaluated Cause
Town Creek	MS013TE	Union, Pontotoc, and Lee	03160102	Nutrients
Near Nettleton from headwaters to the watershed 016 boundary				

Table 2. Water Quality Standards

Parameter	Beneficial use	Water Quality Criteria
Nutrients	Aquatic Life Support	Waters shall be free from materials attributable to municipal, industrial, agricultural, or other dischargers producing color, odor, taste, total suspended or dissolved solids, sediment, turbidity, or other conditions, in such degree as to create a nuisance, render the waters injurious to public health, recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated uses.

Table 3. Total Maximum Daily Load for Town Creek

	WLA lbs/day	LA lbs/day	MOS	TMDL lbs/day
Total Nitrogen	**1355.5**	**1111.2**	Implicit	**2466.7**
Total Phosphorous	**242.2**	**110.2**	Implicit	**352.4**

Table 4. WLA

Permit	Facility	Flow MGD	TN Load lbs/day	TP Load lbs/day
East Union Attendance Center	MS0033235	0.03	2.88	1.30
Elvis Presley Park	MS0034444	0.0154	1.48	0.67
Garden Park Estates	MS0052639	0.072	6.91	3.12
Guntown POTW	MS0023655	0.2	19.20	8.68
Heardtown Estates Subdivision	MS0055972	0.085	8.16	3.69
Mississippi Department of Wildlife, Fisheries and Parks, Tombigbee State Park	MS0033464	0.0075	0.72	0.33
Natchez Trace Tupelo Headquarters	MS0023302	0.025	2.84	1.21
Plantersville POTW	MS0020940	0.27	25.91	11.72
Saltillo POTW	MS0021733	0.98	111.23	14.35
Sherman POTW*	MS0060011	0.2	22.70	9.68
Super 8 Motel	MS0039501	0.0045	0.43	0.20
Tupelo POTW	MS0036111	10.5	1191.77	153.75
Tupelo, City of, Deer Park Estates	MS0048046	0.027	2.59	1.17
Tupelo, City of, Indian Hills Subdivision	MS0022845	0.1335	12.81	5.79
Verona POTW*	MS0042048	1.05	100.77	13.78
Total			**1355.5**	**242.2**

*HCR Facility with a concentration based permit limit

EXECUTIVE SUMMARY

The State of Mississippi originally placed Town Creek on the Mississippi 1996 Section 303(d) List of Impaired Waterbodies due to evaluated causes of pesticides, siltation, nutrients, and organic enrichment (OE) / low dissolved oxygen (Low DO). The Mississippi Department of Environmental Quality (MDEQ) was not able to complete biological monitoring on Town Creek as it is a non-wadeable stream. MDEQ submitted, and EPA approved, a delisting package for OE/Low DO based on recent monitoring data that showed that the water quality standards for DO were being attained in Town Creek. Sediment will be addressed in a separate TMDL report. This TMDL will provide an estimate of the total nitrogen (TN) and total phosphorus (TP) allowable in this water body.

Mississippi does not have water quality standards for allowable nutrient concentrations. MDEQ currently has a Nutrient Task Force (NTF) working on the development of criteria for nutrients. An annual concentration of 0.7 mg/l is an applicable target for TN and 0.10 mg/l for TP for water bodies located in ecoregion 65. MDEQ is presenting these preliminary target values for TMDL development which are subject to revision after the development of numeric nutrient criteria.

The Town Creek Watershed is located in HUC 03160102. The listed portion of Town Creek is near Nettleton from the headwaters to the watershed 016 boundary north of Nettleton. The location of the watershed for the listed segment is shown in Figure 1.

The Town Creek Watershed evaluation indicated that the impairment is due to phosphorus and nitrogen from point and nonpoint sources. The estimated existing ecoregion concentrations indicate reductions of nitrogen and phosphorus can be accomplished with installation of best management practices and reductions to point sources in the watershed.

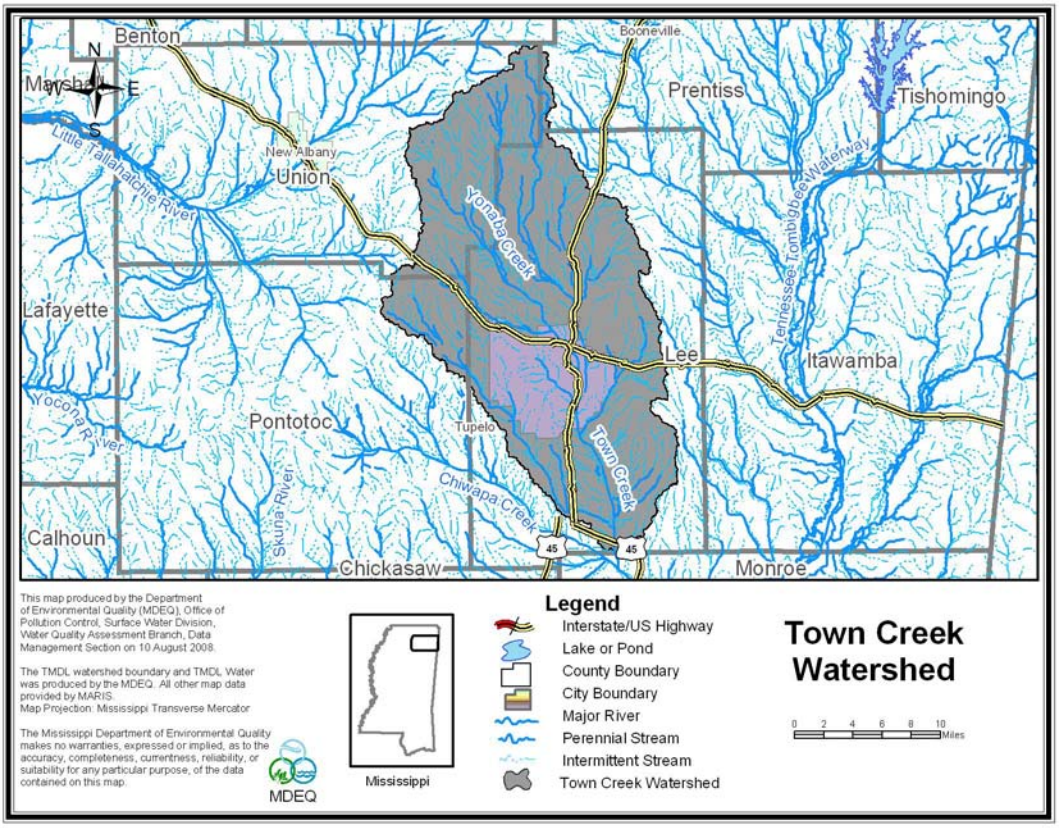


Figure 1. Town Creek

INTRODUCTION

1.1 Background

The identification of water bodies not meeting their designated use and the development of total maximum daily loads (TMDLs) for those water bodies are required by Section 303(d) of the Clean Water Act and the Environmental Protection Agency's (EPA) Water Quality Planning and Management Regulations (40 CFR part 130). The TMDL process is designed to restore and maintain the quality of those impaired water bodies through the establishment of pollutant specific allowable loads. This TMDL has been developed for the 2008 §303(d) listed segment shown in Figure 2.

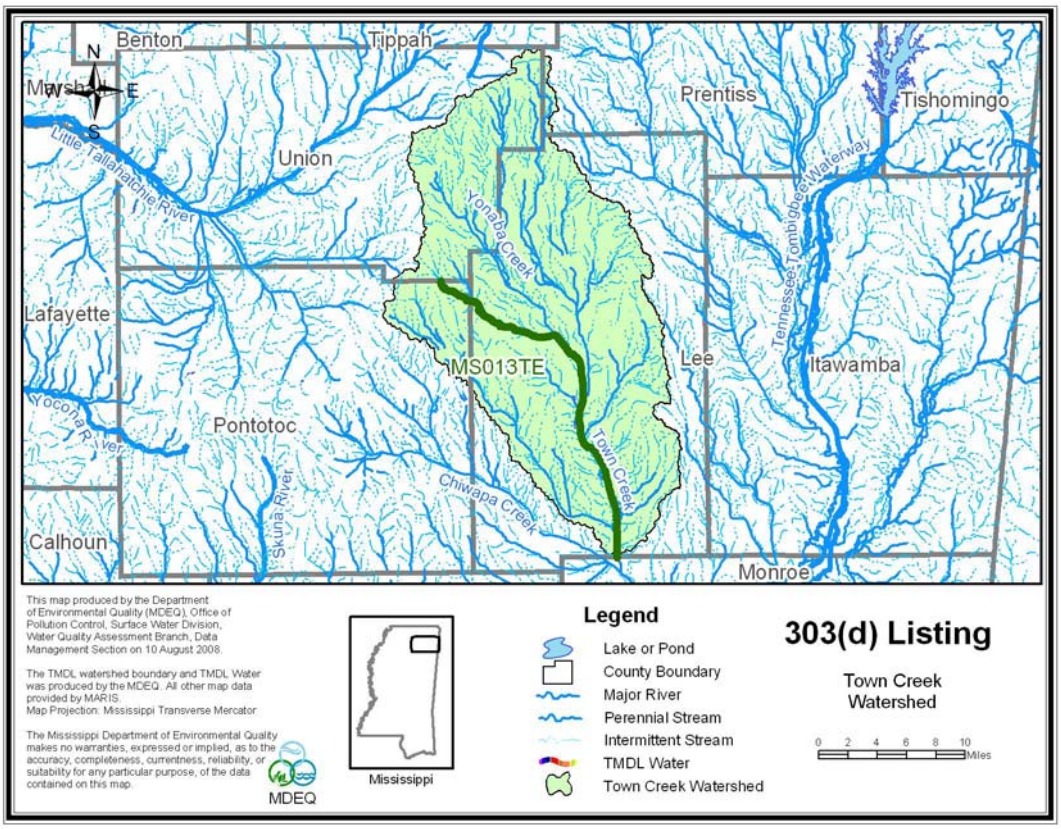


Figure 2. Town Creek §303(d) Listed Segment

1.2 Listing History

The impaired segment was listed due to evaluating the watershed for potential impairment. There is limited data available in the watershed.

There are no state criteria in Mississippi for nutrients. These criteria are currently being developed by the Mississippi Nutrient Task Force in coordination with EPA Region 4. MDEQ proposed a work plan for nutrient criteria development that has been mutually agreed upon with EPA Region 4 and is on schedule according to the approved timeline for development of nutrient criteria (MDEQ, 2007).

1.3 Applicable Water Body Segment Use

The water use classifications are established by the State of Mississippi in the document *State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters* (MDEQ, 2007). The designated beneficial use for the listed segments is Fish and Wildlife.

1.4 Applicable Water Body Segment Standards

The water quality standard applicable to the use of the water body and the pollutant of concern is defined in the *State of Mississippi Water Quality Criteria for Intrastate, Interstate, and Coastal Waters* (MDEQ, 2007). Mississippi's current standards contain a narrative criteria that can be applied to nutrients which states "*Waters shall be free from materials attributable to municipal, industrial, agricultural, or other discharges producing color, odor, taste, total suspended or dissolved solids, sediment, turbidity, or other conditions in such degree as to create a nuisance, render the waters injurious to public health, recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated use* (MDEQ, 2007)."

1.5 Nutrient Target Development

Nutrient data were collected quarterly at 99 discrete sampling stations state wide where biological data already existed. These stations were identified and used to represent a range of stream reaches according to biological health status, geographic location (selected to account for ecoregion, bioregion, basin and geologic variability) and streams that potentially receive non-point source pollution from urban, agricultural, and silviculture lands as well as point source pollution from NPDES permitted facilities.

Nutrient concentration data were not normally distributed; therefore, data were log transformed for statistical analyses. Data were evaluated for distinct patterns of various data groupings (stratification) according to natural variability. Only stations that were characterized as "least disturbed" through a defined process in the M-BISQ process (M-BISQ 2003) or stations that resulted in a biological impairment rating of "fully attaining" were used to evaluate natural variability of the data set. Each of these two groups was evaluated separately ("least disturbed sites" and "fully attaining sites"). Some stations were used in both sets, in other words, they were considered "least disturbed" and "fully attaining". The number of stations considered "least disturbed" was 30 of 99, and the number of stations considered "fully attaining" was 53 of 99.

Several analysis techniques were used to evaluate nutrient data. Graphical analyses were used as the primary evaluation tool. Specific analyses used included; scatter plots, box plots, Pearson's correlation, and general descriptive statistics.

In general, natural nutrient variability was not apparent based on box plot analyses according to the 4 stratification scenarios. Bioregions were selected as the stratification scheme to use for TMDLs in the Pascagoula Basin. However, this was not appropriate for some water bodies in smaller bioregions. Therefore, MDEQ now uses ecoregions as a stratification scheme for the water bodies in the remainder of the state.

In order to use the data set to determine possible nutrient thresholds, nutrient concentrations were evaluated as to their correlation with biological metrics. That thorough evaluation was completed prior to the Pascagoula River Basin TMDLs. The methodology and approach were verified. The same methodology was applied to the subsequent ecoregions.

For the preliminary target concentrations for each ecoregion, the 90^{th} percentile was derived from the mean nutrient value at each site found to be fully supporting of aquatic life support according to the M-BISQ scores.

WATER BODY ASSESSMENT

2.1 Water Quality Data

There is limited nutrient data available for Town Creek. A water quality study was conducted on Town Creek in September of 1999. These data are provided in Table 5 below. A map showing the station locations is provided in Figure 3.

Table 5. Water Quality Data

Station	Date	Time	TN (mg/l)	TP (mg/l)
Tup 1	9/13/1999	16:50	2.89	0.13
	9/14/1999	16:45	2.68	0.16
	9/15/1999	7:41	2.57	0.14
	9/15/1999	7:50	2.68	0.12
Tup 2	9/13/1999	15:00	7.78	1.80
	9/14/1999	16:05	9.42	2.08
	9/15/1999	8:30	6.30	1.09
	9/15/1999	8:31	8.44	1.51
Tup 3	9/13/1999	12:45	5.20	0.97
	9/14/1999	15:40	7.28	1.13
	9/15/1999	10:19	6.16	1.03
Tup 4	9/13/1999	13:30	4.78	0.87
	9/14/1999	14:15	4.69	0.77
	9/15/1999	11:04	5.56	0.82

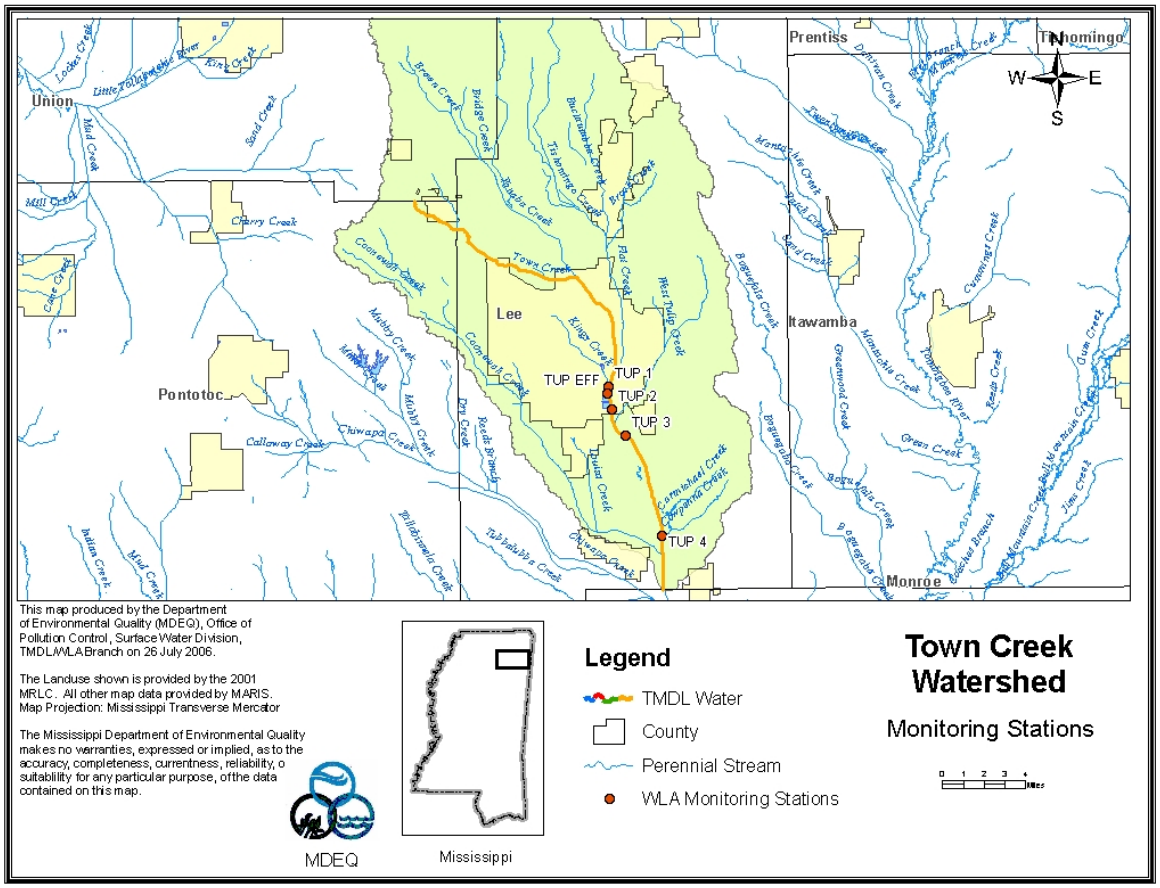


Figure 3. Town Creek Water Quality Station Locations

2.2 Assessment of Point Sources

An important part of the TMDL analysis is the identification of individual sources, source categories, or source subcategories of nutrients in the watershed and the amount of pollutant loading contributed by each of these sources. Under the CWA, sources are broadly classified as either point or nonpoint sources. Under 40 CFR §122.2, a point source is defined as a discernable, confined, and discrete conveyance from which pollutants are or may be discharged to surface waters. The National Pollutant Discharge Elimination System (NPDES) program regulates point source discharges. Point sources can be described by two broad categories: 1) NPDES regulated municipal and industrial wastewater treatment plants (WWTPs) and 2) NPDES regulated activities, which include construction activities and municipal storm water discharges (Municipal Separate Storm Sewer Systems [MS4s]). For the purposes of this TMDL, all sources of nutrient loading not regulated by NPDES permits are considered nonpoint sources.

There are 15 NPDES regulated municipal and industrial WWTPs in the watershed included in the TMDL that are shown in Table 6. The wastewater from the facilities was characterized based upon the best available information. Literature values were used to estimate the mass loadings from municipal discharges (USEPA 1999). The largest discharger in the watershed is the Tupelo POTW which contributes approximately 80% of the TN and TP point source load in the watershed.

Table 6. NPDES Sources

Facility Name	Permit	Discharge (MGD)	Treatment Type
East Union Attendance Center	MS0033235	0.03	Aerated Lagoon
Elvis Presley Park	MS0034444	0.0154	Conventional Lagoon
Garden Park Estates	MS0052639	0.072	Conventional Lagoon
Guntown POTW	MS0023655	0.2	Conventional Lagoon
Heardtown Estates Subdivision	MS0055972	0.085	Conventional Lagoon
Mississippi Department of Wildlife, Fisheries and Parks, Tombigbee State Park	MS0033464	0.0075	Conventional Lagoon
Natchez Trace Tupelo Headquarters	MS0023302	0.025	Activated Sludge
Plantersville POTW	MS0020940	0.27	HCR Lagoon
Saltillo POTW	MS0021733	0.98	Oxidation Ditch
Sherman POTW	MS0060011	0.2	Activated Sludge
Super 8 Motel	MS0039501	0.0045	Conventional Lagoon
Tupelo POTW	MS0036111	10.5	Activated Sludge
Tupelo, City of, Deer Park Estates	MS0048046	0.027	Conventional Lagoon
Tupelo, City of, Indian Hills Subdivision	MS0022845	0.1335	Conventional Lagoon
Verona POTW	MS0042048	1.05	HCR Lagoon

There are no MS4 permits within the Town Creek Watershed.

2.3 Assessment of Non-Point Sources

Non-point loading of nutrients in a water body results from the transport of the pollutants into receiving waters by overland surface runoff, groundwater infiltration, and atmospheric deposition. The two primary nutrients of concern are nitrogen and phosphorus. Total nitrogen is a combination of many forms of nitrogen found in the environment. Inorganic nitrogen can be transported in particulate and dissolved phases in surface runoff. Dissolved inorganic nitrogen can be transported in groundwater and may enter a water body from groundwater infiltration. Finally, atmospheric gaseous nitrogen may enter a water body from atmospheric deposition.

Unlike nitrogen, phosphorus is primarily transported in surface runoff when it has been sorbed by eroding sediment. Phosphorus may also be associated with fine-grained particulate matter in the atmosphere and can enter streams as a result of dry fallout and rainfall (USEPA, 1999). However, phosphorus is typically not readily available from the atmosphere or the natural water supply (Davis and Cornwell, 1988). As a result, phosphorus is typically the limiting nutrient in most non-point source dominated rivers and streams, with the exception of watersheds which are dominated by agriculture and have high concentrations of phosphorus contained in the surface runoff due to fertilizers and animal excrement or watersheds with naturally occurring soils which are rich in phosphorus (Thomann and Mueller, 1987).

Watersheds with a large number of failing septic tanks may also deliver significant loadings of phosphorus to a water body. All domestic wastewater contains phosphorus which comes from humans and the use of phosphate containing automatic dishwashing detergents. Table 7 presents the estimated loads from various land use types in the Tombigbee Basin based on information from USDA ARS Sedimentation Laboratory (Shields, et. al., 2008).

The watershed contains mainly forest land but also has different landuse types, including urban, water, and wetlands. The land use information for the watershed is based on the National Land Cover Database (NLCD). Forest is the dominant landuse within this watershed. The landuse distribution for the Town Creek Watershed is shown in Table 7 and Figure 4. By multiplying the landuse category size by the estimated nutrient load, the watershed specific estimate can be calculated. Table 7 presents the estimated loads, the target loads, and the reductions needed to meet the TMDLs.

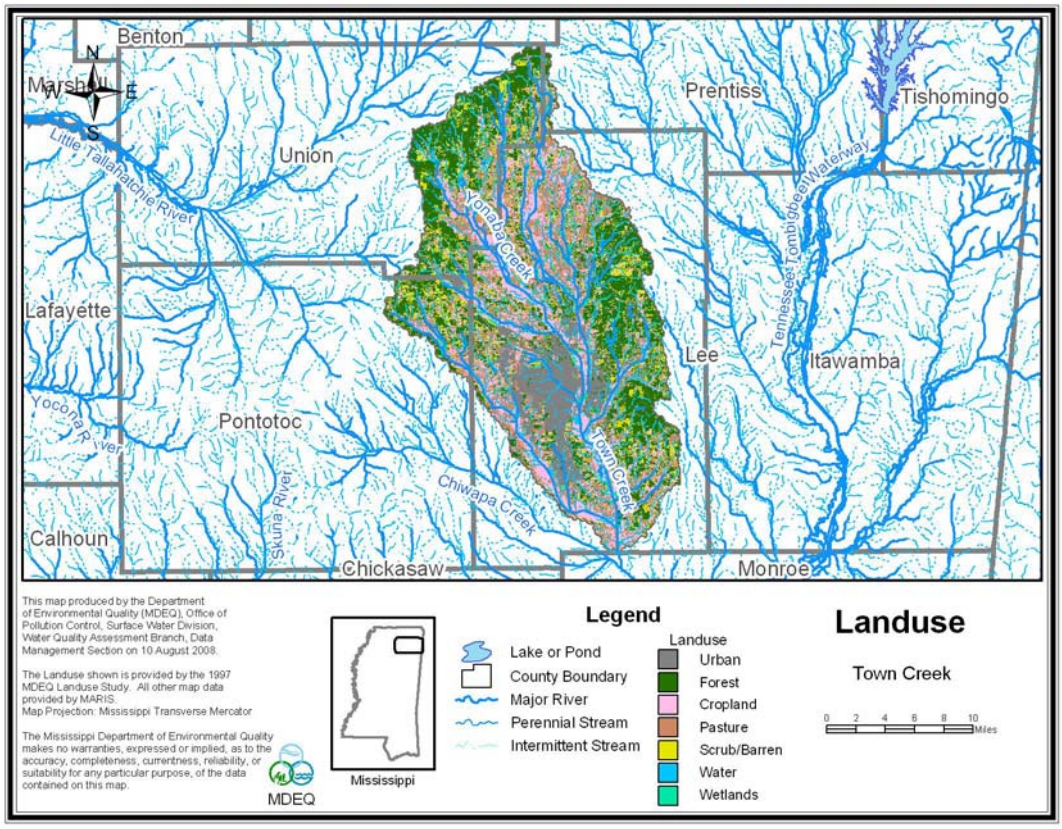
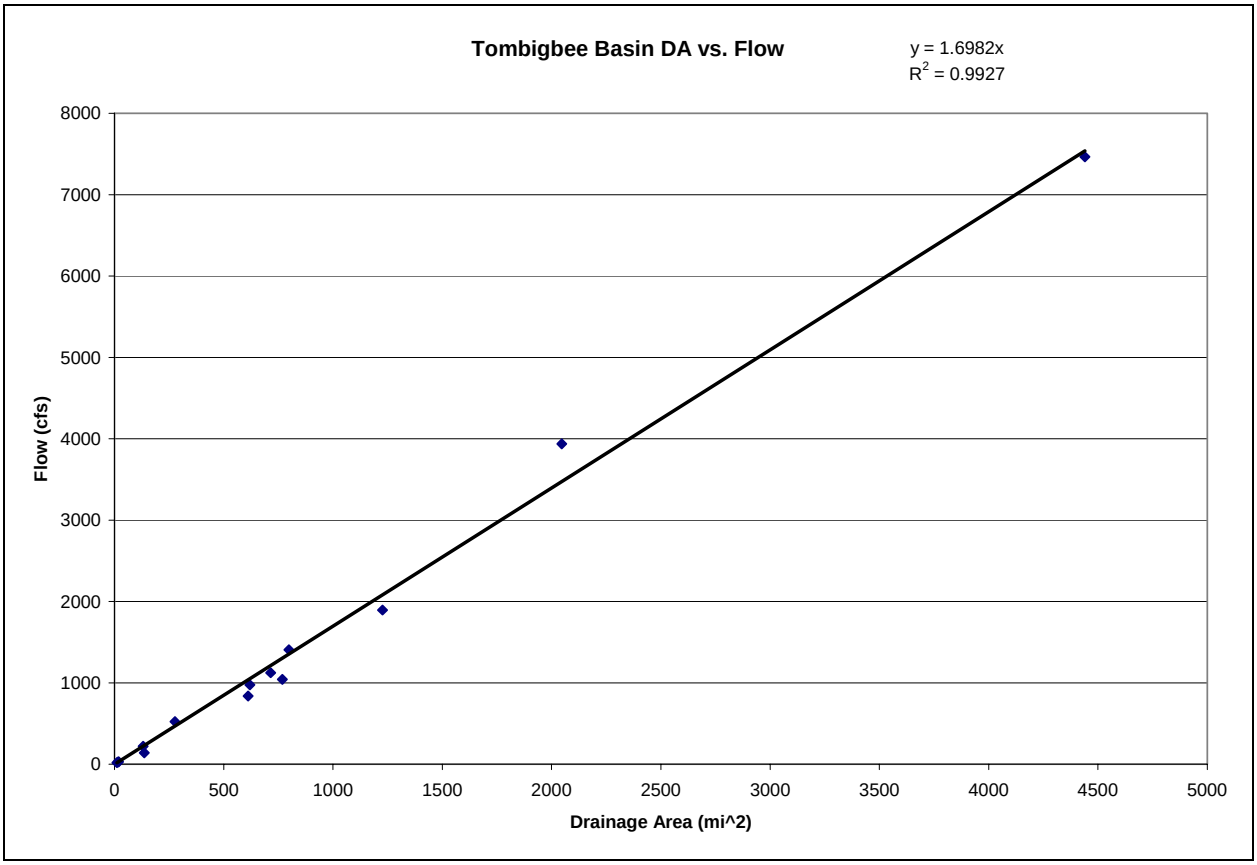


Figure 4. Town Creek Watershed Landuse

2.4 Estimated Existing Load for Total Nitrogen and Total Phosphorus

The average annual flow in the watershed was calculated by utilizing the flow vs. watershed area graph shown in Figure 5. All available gages were compared to the watershed size. A very strong correlation between flow and watershed size was developed for the Tombigbee Basin in Mississippi. The equation for the line that best fits the data was then used to estimate the annual average flow for the Town Creek watershed. The TMDL target TN and TP loads were then calculated, using Equation 1 and the results are shown in Table 7.

Figure 5. Tombigbee Basin Drainage Area to Flow Comparison



Nutrient Load (lb/day) = Flow (cfs) * 5.394 (conversion factor)* Nutrient Concentration (mg/L) (Equation 1)

Table 7. TMDL Calculations and Watershed Sizes

Water body	**Town Creek**		**Water**	**Urban**	**Scrub/Barren**	**Forest**	**Pasture/Grass**	**Cropland**	**Wetland**	**Total**	
		Acres	2421.7	11131.7	33859.4	55539.9	102520.3	39988.0	771.8	246232.8	
Land Use	**TN kg/mile2**	Percent	0.98%	4.52%	13.75%	22.56%	41.64%	16.24%	0.31%	100.00%	
Forest	111.3	Miles^2 in watershed	3.8	17.4	52.9	86.8	160.2	62.5	1.2	384.7	
Pasture	777.2	Flow in cfs based on area	653.3	cfs							
Cropland	5179.9										
Urban	296.4	TN Load kg/mi^2 annual avg	257.4	296.4	111.3	111.3	777.2	5179.9	265.2		
Water	257.4	TP Load kg/mi^2 annual avg	257.4	3.1	62.1	62.1	777.2	2589.9	265.2		
Wetland	265.2										
aquaculture	111.3	TN Load kg/day	2.7	14.1	16.1	26.5	341.1	886.7	0.9	1288.1	kg/day
		TP Load kg/day	2.7	0.1	9.0	14.8	341.1	443.3	0.9	811.9	kg/day
Land Use	**TP kg/mile2**										
Forest	62.1	TN target concentration	0.7	mg/l							
Pasture	777.2	TP target concentration	0.1	mg/l							
Cropland	2589.9										
Urban	3.1	TN estimated concentration	0.81	mg/l							
Water	257.4	TP estimated concentration	0.51	mg/l							
Wetland	265.2										
aquaculture	62.1	TN target load	2466.73	lbs/day							
		TP target load	352.39	lbs/day							
		TN estimated load per day	2839.69	lbs/day							
		TP estimated load per day	1789.92	lbs/day							
		TN reduction needed	13%								
		TP reduction needed	80%								

The land use calculations are based on 2004 data. The nutrient estimates are based on USDA ARS. The TMDL targets are based on EPA guidance for calculation of targets when considering all available data.

ALLOCATION

3.1 Wasteload Allocation

There are 15 NPDES point sources included in this nutrient TMDL. The WLA for the 15 point sources is shown in Table 7. Future permits will be considered in accordance with Mississippi's *Wastewater Regulations for National Pollutant Discharge Elimination System (NPDES) Permits, Underground Injection Control (UIC) Permits, State Permits, Water Quality Based Effluent Limitations and Water Quality Certification*(1994).

This TMDL recommends a 13% reduction to the Tupelo POTW point source loading of TN. The TMDL does not recommend TN reductions to the other minor facilities in the watershed. It does recommend quarterly monitoring of TN and applying the TN WLA load at these facilities. These limits are shown in Table 8. The WLA for TN is 1355.5 lbs and 55% of the TMDL target load.

This TMDL recommends an 80% reduction to the Tupelo POTW point source loading of TP. This TMDL does not recommend TP reductions to the other minor facilities in the watershed. It does recommend quarterly monitoring of TP and applying the TP WLA load at these facilities. These limits are also shown in Table 8. The WLA for TP is 242.2 lbs TP and 69% of the TP TMDL target load.

Table 8. NPDES Sources

Facility Name	Permit	Discharge (MGD)	TP (mg/l)	TN (mg/l)	TP (lbs/day)	TN (lbs/day)
East Union Attendance Center	MS0033235	0.03	5.2	11.5	1.30	2.88
Elvis Presley Park	MS0034444	0.0154	5.2	11.5	0.67	1.48
Garden Park Estates	MS0052639	0.072	5.2	11.5	3.12	6.91
Guntown POTW	MS0023655	0.2	5.2	11.5	8.68	19.20
Heardtown Estates Subdivision	MS0055972	0.085	5.2	11.5	3.69	8.16
Mississippi Department of Wildlife, Fisheries and Parks, Tombigbee State Park	MS0033464	0.0075	5.2	11.5	0.33	0.72
Natchez Trace Tupelo Headquarters	MS0023302	0.025	5.8	13.6	1.21	2.84
Plantersville POTW	MS0020940	0.27	5.2	11.5	11.72	25.91
Saltillo POTW	MS0021733	0.98	5.8	13.6	47.44	111.23
Sherman POTW*	MS0060011	0.2	5.8	13.6	9.68	22.70
Super 8 Motel	MS0039501	0.0045	5.2	11.5	0.20	0.43
Tupelo POTW	MS0036111	10.5	1.16	11.83	101.65	1036.84
Tupelo, City of, Deer Park Estates	MS0048046	0.027	5.2	11.5	1.17	2.59
Tupelo, City of, Indian Hills Subdivision	MS0022845	0.1335	5.2	11.5	5.79	12.81
Verona POTW*	MS0042048	1.05	5.2	11.5	45.57	100.77
Total					**242.2**	**1355.5**

*HCR Facility with a concentration based permit limit

3.2 Load Allocation

This TMDL recommends a 13% reduction to nonpoint source loads of TN and an 80% reduction to nonpoint source loads of TP based on the analysis given in Table 7. Best management practices (BMPs) should be encouraged in the watersheds to reduce potential TN and TP loads from non-point sources. The LA for TN and TP was calculated by subtracting the WLA from the TMDL. For land disturbing activities related to silvaculture, construction, and agriculture, it is recommended that practices, as outlined in "Mississippi's BMPs: Best Management Practices for Forestry in Mississippi" (MFC, 2000), "Planning and Design Manual for the Control of Erosion, Sediment, and Stormwater" (MDEQ, et. al, 1994), and "Field Office Technical Guide" (NRCS, 2000), be followed, respectively.

3.3 Incorporation of a Margin of Safety

The margin of safety is a required component of a TMDL and accounts for the uncertainty about the relationship between pollutant loads and the quality of the receiving water body. The two types of MOS development are to implicitly incorporate the MOS using conservative model assumptions or to explicitly specify a portion of the total TMDL as the MOS. The MOS selected for this model is implicit.

3.4 Calculation of the TMDL

Equation 1 was used to calculate the TMDL for TP and TN. The target concentration was used with the average flow for the watershed to determine the nutrient TMDLs. The existing point sources are a minor contributor to the nutrient load in the watershed. The allocations in the TMDL are established to attain the applicable water quality standards.

Table 9. TMDL Loads

	WLA lbs/day	WLA sw lbs/day	LA lbs/day	MOS	TMDL lbs/day
Total Nitrogen	**1355.5**	**NA**	**1111.2**	Implicit	**2466.7**
Total Phosphorous	**242.2**	**NA**	**110.2**	Implicit	**352.4**

3.5 Seasonality and Critical Condition

This TMDL accounts for seasonal variability by requiring allocations that ensure year-round protection of water quality standards, including during critical conditions.

CONCLUSION

Nutrients were addressed through an estimate of a preliminary total phosphorous concentration target and a preliminary total nitrogen concentration target. Based on the estimated existing and target TN and TP concentrations, this TMDL recommends a 13% reduction of the point and nonpoint TN loads and an 80% reduction of the point and nonpoint TP loads entering the water body to meet the preliminary target of 0.70 mg/l TN and 0.10 mg/l TP. Due to the relatively low percent contribution of the majority of the point sources in the watershed, the point source reduction will be focused on the Tupelo POTW whose estimated existing TN and TP contribution is nearly 80% of the point source load in the watershed. NPDES permit limits for TP and TN are recommended in Table 8. The implementation of BMP activities should reduce the nutrient load entering Town Creek. This will provide improved water quality for the support of aquatic life in the water bodies, and will result in the attainment of the applicable water quality standards.

4.1 Next Steps

MDEQ's Basin Management Branch and Nonpoint Source Program emphasize restoration of impaired waters with developed TMDLs. During the watershed prioritization process to be conducted by the Tombigbee River Basin Team, this TMDL will be considered as a basis for implementing possible restoration projects. The basin team is made up of state and federal resource agencies and stakeholder organizations and provides the opportunity for these entities to work with local stakeholders to achieve quantifiable improvements in water quality. Together, basin team members work to understand water quality conditions, determine causes and sources of problems, prioritize watersheds for potential water quality restoration and protection activities, and identify collaboration and leveraging opportunities. The Basin Management Branch and the Nonpoint Source Program work together to facilitate and support these activities.

The Nonpoint Source Program provides financial incentives to eligible parties to implement appropriate restoration and protection projects through the Clean Water Act's Section 319 Nonpoint Source (NPS) Grant Program. This program makes available around $1.6M each grant year for restoration and protections efforts by providing a 60% cost share for eligible projects.

Mississippi Soil and Water Conservation Commission (MSWCC) is the lead agency responsible for abatement of agricultural NPS pollution through training, promotion, and installation of BMPs on agricultural lands. USDA Natural Resource Conservation Service (NRCS) provides technical assistance to MSWCC through its conservation districts located in each county. NRCS assists animal producers in developing nutrient management plans and grazing management plans. MDEQ, MSWCC, NRCS, and other governmental and nongovernmental organizations work closely together to reduce agricultural runoff through the Section 319 NPS Program.

Mississippi Forestry Commission (MFC), in cooperation with the Mississippi Forestry Association (MFA) and Mississippi State University (MSU), have taken a leadership role in the development and promotion of the forestry industry Best Management Practices (BMPs) in Mississippi. MDEQ is designated as the lead agency for implementing an urban polluted runoff control program through its Stormwater Program. Through this program, MDEQ regulates most construction activities. Mississippi Department of Transportation (MDOT) is responsible for implementation of erosion and sediment control practices on highway construction.

Due to this TMDL, projects within this watershed will receive a higher score and ranking for funding through the basin team process and Nonpoint Source Program described above.

4.2 Public Participation

This TMDL will be published for a 30-day public notice. During this time, the public will be notified by publication in the statewide newspaper. The public will be given an opportunity to review the TMDLs and submit comments. MDEQ also distributes all TMDLs at the beginning of the public notice to those members of the public who have requested to be included on a TMDL mailing list. Anyone wishing to become a member of the TMDL mailing list should contact Kay Whittington at Kay_Whittington@deq.state.ms.us.

All comments should be directed to Kay_Whittington@deq.state.ms.us or Kay Whittington, MDEQ, PO Box 2261, Jackson, MS 39225. All comments received during the public notice period and at any public hearings become a part of the record of this TMDL and will be considered in the submission of this TMDL to EPA Region 4 for final approval.

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