



State of Mississippi Water Quality Assessment 2004 Section 305(b) Report Addendum



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Mississippi Department of
Environmental Quality

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BASIN ASSESSMENTS

Introduction

MDEQ manages its surface water programs on a river basin scale and has established a process that coordinates the water assessment and management activities of numerous state and federal agencies. This process, the Mississippi Basin Management Approach, is responsible for the development of and recurring updates to, basin management plans for Mississippi's major river basins. This section is an addendum to the *State of Mississippi Water Quality Assessment 2004 §305(b) Report*. This addendum provides water quality assessments and general land use and water resources information specific to each of the state's major river basins. There are no new assessments represented in this addendum that are not part of the 2004 §305b report statewide summary presented in the main document. The information in this section is strictly a representation of the statewide §305(b) assessments broken down by river basin.

Hydraulically, the waters of Mississippi are divided into ten major drainage areas or river basins. These ten basins are the Big Black River Basin, Coastal Streams Basin, Mississippi River Basin, North Independent Streams Basin, Pascagoula River Basin, Pearl River Basin, South Independent Streams Basin, Tennessee River Basin, Tombigbee River Basin and Yazoo River Basin. The boundaries for each basin are shown in Figure 1. For MDEQ management purposes, the Mississippi River Basin has been divided into upper and lower portions. The upper portion has been grouped with the Yazoo River Basin and the lower portion has been grouped with the South Independent Streams Basin.

In the following sections, a discussion of each basin's location, water resources, special water body classifications, and water quality monitoring stations used in the §305(b) assessment process is presented. In addition, a brief description of each basin's physiography, population, and land use/land cover distribution are also given. Surface water quality assessment data are presented and discussed including a summary of the basin's water body assessment status and causes and sources of impairment. Maps, tables and other graphical charts are utilized fluently in depiction of the above information. At the end of each basin section is an alphabetical listing of all individual water body assessments made for the 2004 §305(b) report. With each water body entry, pertinent information regarding water body ID number, county, reach location, assessed use, and assessment status are shown. This table also provides the necessary information to cross-reference §305(b) assessments with the 2004 §303(d) list.

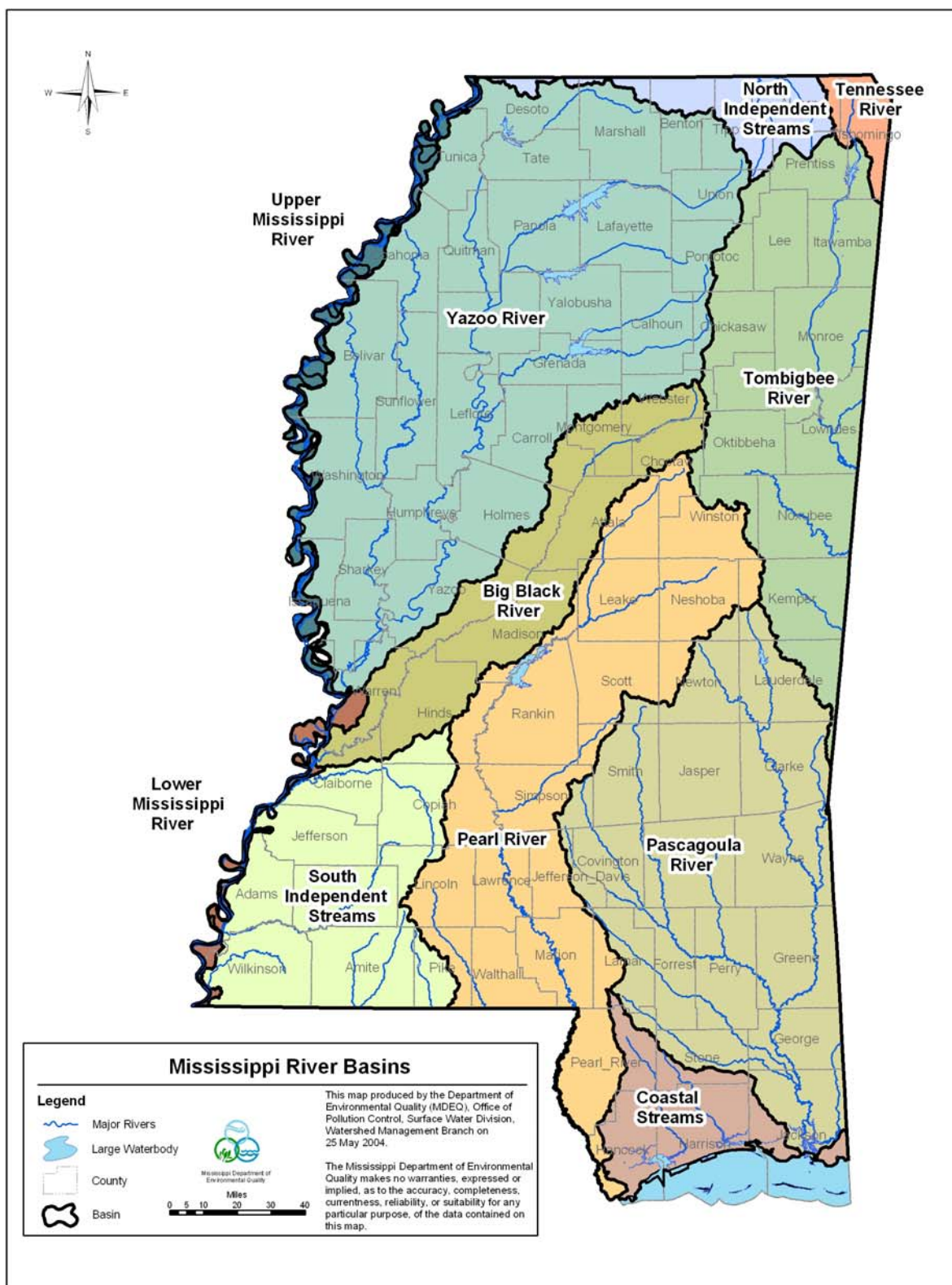


Figure 1: Mississippi's Ten Major Drainage Basins

BIG BLACK RIVER BASIN

Basin Description

The Big Black River Basin is located in the west-central part of Mississippi. The basin is approximately 155 miles in length and averages 22 miles in width. It covers an area of about 3,400 square miles and has 6,638 linear miles of river and streams. The Big Black River, which lies entirely within the boundaries of Mississippi, begins in Webster County, near the town of Eupora in north-central Mississippi and flows southwesterly for

approximately 300 miles to its mouth at the Mississippi River 25 miles south of Vicksburg.

Tributaries to the Big Black River include Big Bywy Ditch, Zilpha Creek, Apookta Creek, Doaks Creek, Bear Creek, Bogue Chitto Creek and Fourteen Mile-Bakers Creek.

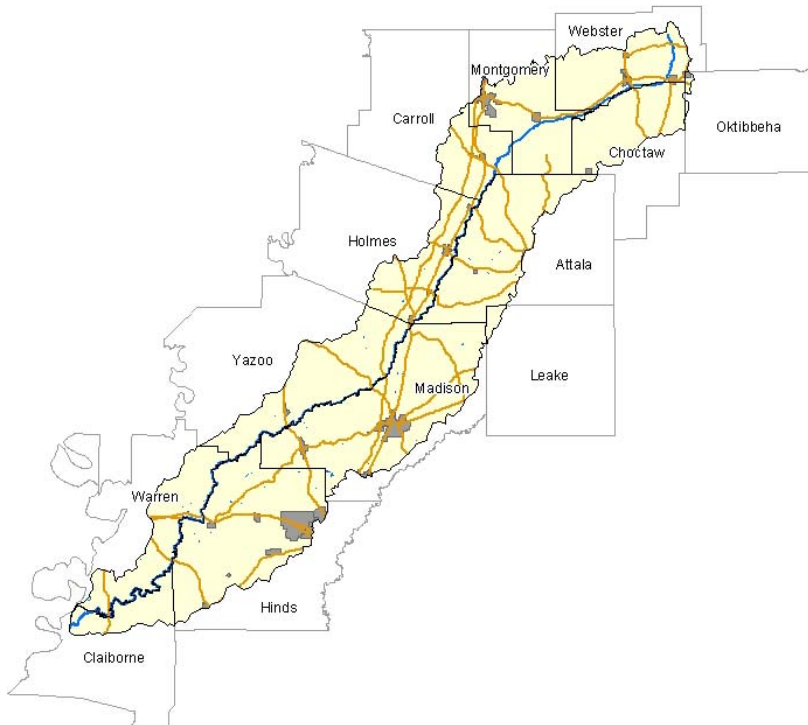


Figure 2: Big Black River Basin (MDEQ)

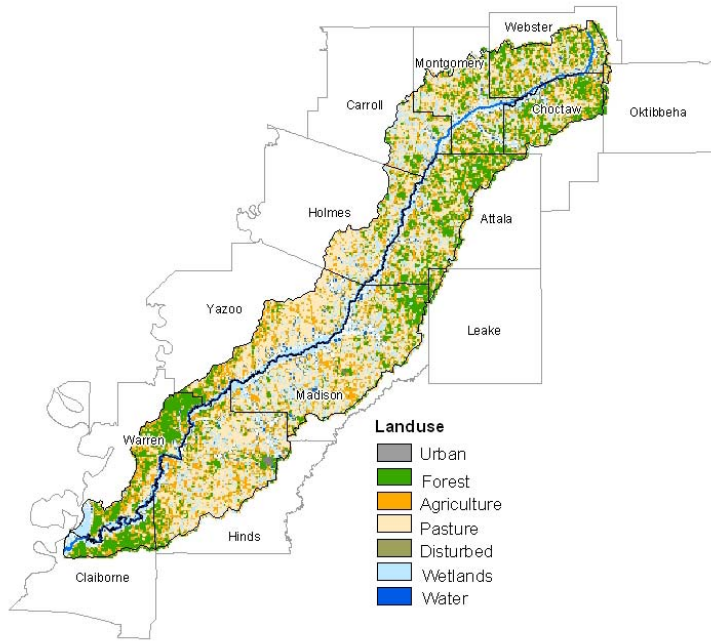
Most of the region is made up of hilly to gently rolling land and is largely forested. On the western side of the basin, high bluffs are present as the land nears the Mississippi River.

The Big Black River Basin encompasses all or part of 13 counties, including 24 municipalities. However, Leake and Oktibbeha counties have only a very small part of their total area in the basin. According to the 2000 census, approximately 220,000 people live in the basin which totals out to be approximately 64 people per square mile.

Although the majority of the basin is not densely populated, the largest populations are in Hinds and Madison counties including the northwestern section of the City of Jackson and the cities of Clinton and Canton. Madison County (Canton area) had the largest increase in population among the basin counties due to the resulting economic growth from the opening of the Nissan Automotive Manufacturing Facility near Canton.

Land Use

A depiction of the major land cover in the basin is given in Figure 3. Natural forests are the predominant land cover in the Big Black River Basin. The *forests* are evenly distributed and comprise approximately 36% of the total land area of the basin (Figure 4). *Agricultural* areas including pasture, rangelands and croplands comprise approximately 35% of the total land area. The



The Big Black River Basin has approximately 176,600 acres of *wetlands* (8% of the basin land area) with about 150,000 being bottomland hardwood forests. Despite growing cities such as Canton, Clinton and the northwest portion of the capital city of Jackson, *urban* areas make up only 1% of the land cover of the basin. *Disturbed areas* (strip mines, gravel pits, sandy areas, barren, and transitional areas) make up 19% of the land use in the basin. *Water* sources (fresh and aquaculture) make up the remaining 1% of land cover.

Figure 3: Distribution of Land Cover-Big Black River Basin (MARIS)

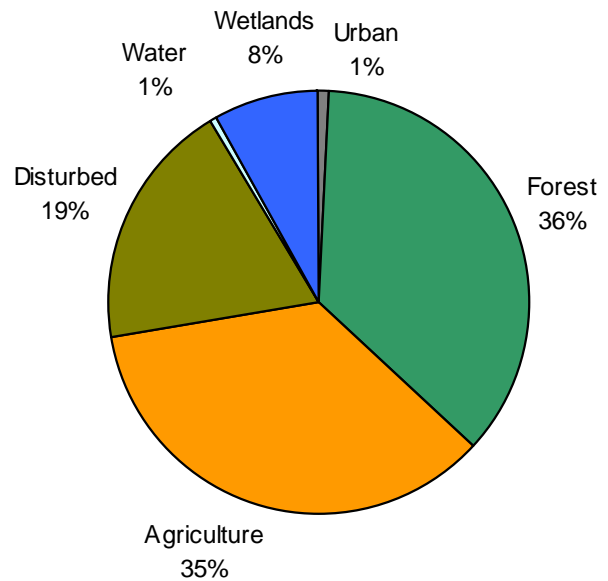


Figure 4: Grouping of Land Cover in the Big Black River Basin (MARIS)

Water Resources

The Big Black River Basin has 6,638 total miles of perennial and intermittent rivers and streams. The Big Black River and its tributaries, according to the state's water quality standards, are classified as Fish and Wildlife streams. Waters in this classification are intended for fishing and for the propagation of fish, aquatic life and wildlife and are also intended for secondary contact recreation. Secondary contact recreation is defined as incidental contact with the water, including wading and occasional swimming.

There is little base flow in many of the streams in the Big Black River Basin. The Big Black River and many of its tributaries in the northern part of the basin carry large amounts of suspended sediments and are normally very turbid. A number of the streams in the basin are muddy and slow flowing, while others are characterized by clear water and are swift with sandy bottoms. The Big Black River is one of the last remaining undammed river systems east of the Mississippi River. Near the Mississippi River, the lower end of the Big Black River becomes flatter and is subject to the Mississippi River's rise and fall which greatly affects the dynamics of this water body.

There are no major public reservoirs or lakes within the Big Black River Basin. There is a small public state-owned lake near Durant, Holmes County State Park Lake.

The Big Black River Basin does not have large-scale development and most of its tributaries are wild and undeveloped, and are, therefore, in a relatively natural condition. This "natural state" provides for wildlife and plant populations that are very diverse. A 50-mile stretch of the Big Black River in Warren and Yazoo counties provides habitat for the rare blue suckerfish. The Big Black River Basin has 5 federally threatened and two federally endangered species. Additionally, approximately 27 animal species and 22 plant species are listed as "special concern" in the Natural Heritage Inventory. Several of the small tributaries in the headwaters of the Big Black River contain a diverse community of fishes and benthic macroinvertebrates (e.g., worms, crayfish, and fresh water shrimp). The Big Black River is recognized for its outstanding catfish fishery. The Big Black is a bountiful host to recreational fisherman, who take crappie, bream and buffalo fish in addition to catfish from its waters. As such, it has been proposed for review as a potential Mississippi Natural and Scenic Waterway.

Surface Water Assessment

Designated Use Support

The assessments for the Big Black River Basin were based on data from a total of 70 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project (M-BISQ) and the §303(d) fecal coliform monitoring project (Figure 5). The perennial streams where the monitoring stations were located represented the mainstem drainage for each 11-digit watershed in the basin. Use support status for the basin is presented and summarized with causes and sources of impairment.

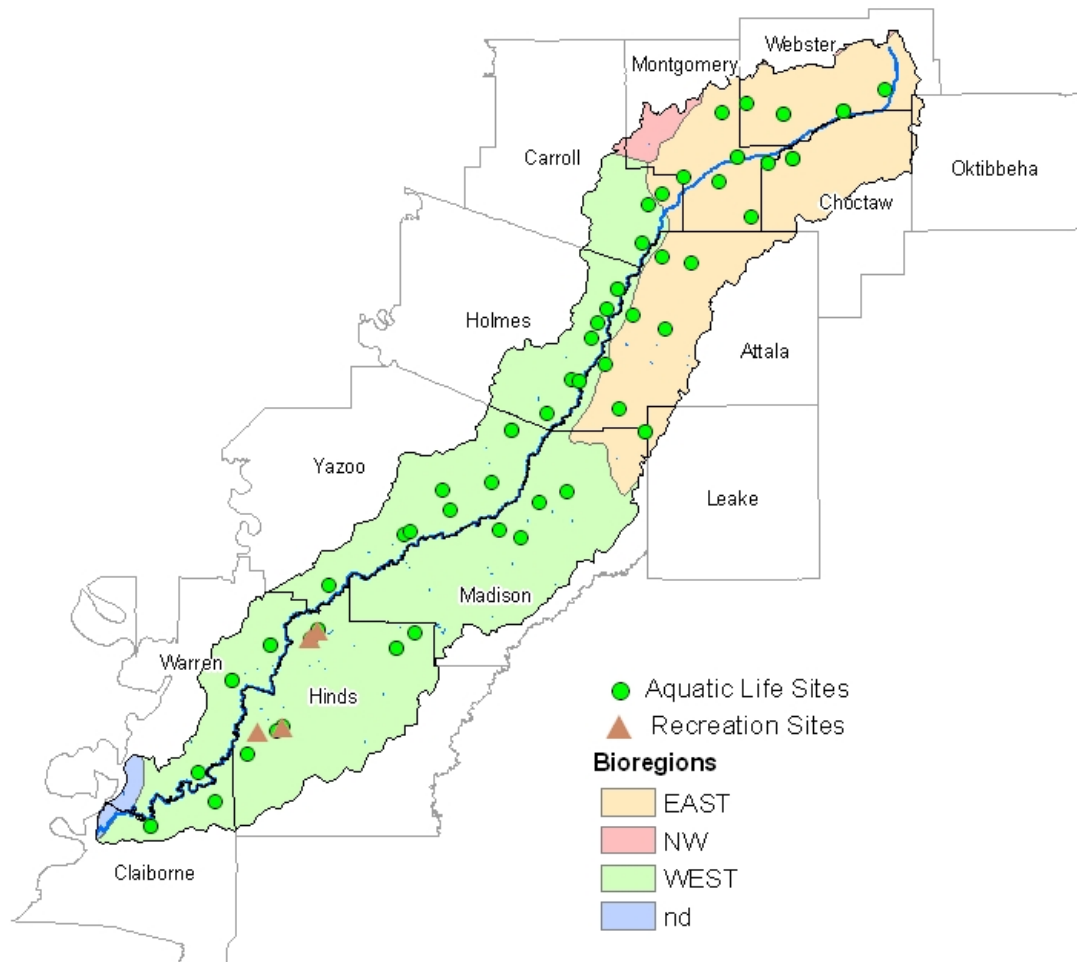


Figure 5: Big Black River Basin Monitoring Stations and M-BISQ Bioregions

MDEQ assessed approximately 33% (549 miles) of the total 1,668 perennial miles of streams and rivers in the Big Black River Basin. The status of water quality on the remaining 67% (1,119 miles) of the basin's perennial rivers and streams is unknown. The majority of stream miles (76%) in the Big Black River Basin is composed of intermittent streams and therefore is not readily assessable. A summary of use support for the basin's assessed rivers and streams is found in Table 1 and Figure 6. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

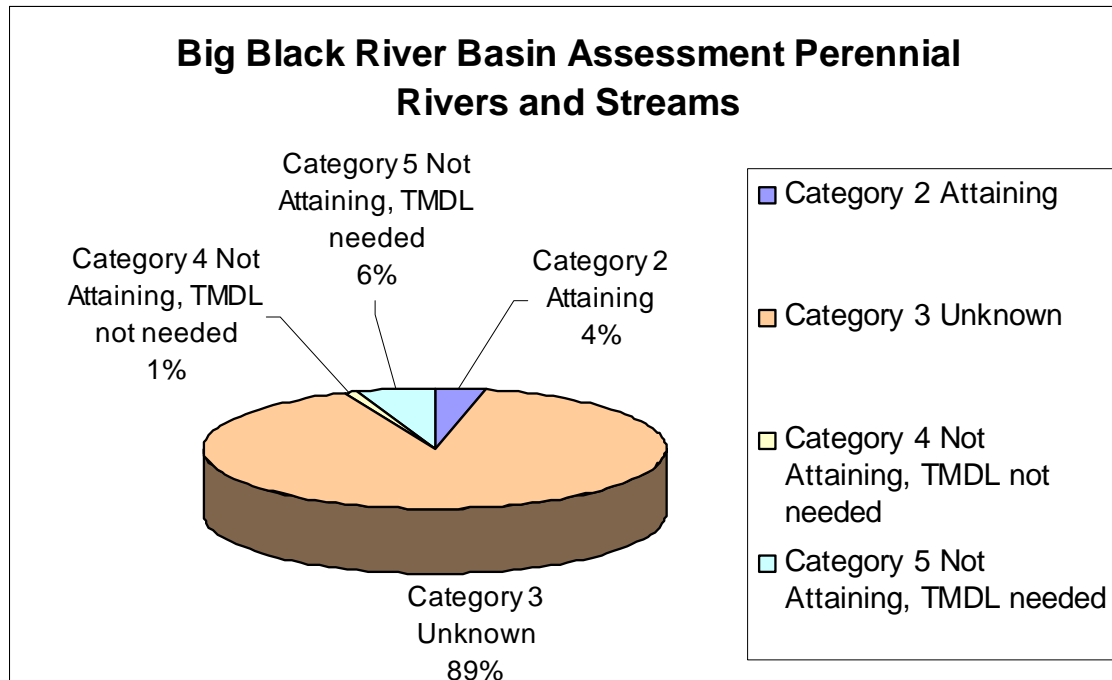
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the Big Black River Basin, approximately 4% are in category 2 for attaining some uses but unknown for remaining water body uses, and 1% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 6% of the assessed water bodies. The status of the remaining 89% of water bodies in the Big Black River Basin is unknown and these waters are reflected in category 3. Of the 312 miles of waters in category 5, 95% (296 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the Big Black River Basin section of the 2004 §303(d) list. Please refer to Table 5 at the end of the Big Black River Basin section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference §305(b) assessments with the §303(d) list.

Table 1: Summary of Big Black River Basin Use Support Assessments – Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	201
Category 3: Unknown/Insufficient Data for Assessment	6,089
Intermittent Miles	4,970
Perennial Miles	1,119
Category 4: Not Attaining – No TMDL Needed	36
A. TMDL Completed	36
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	312
A. Pollutant Identified	16
B. Biological Impairment- Cause Unknown	296
Total Miles	6,638

**Figure 6: Big Black River Basin Assessment of Perennial River and Stream Miles**

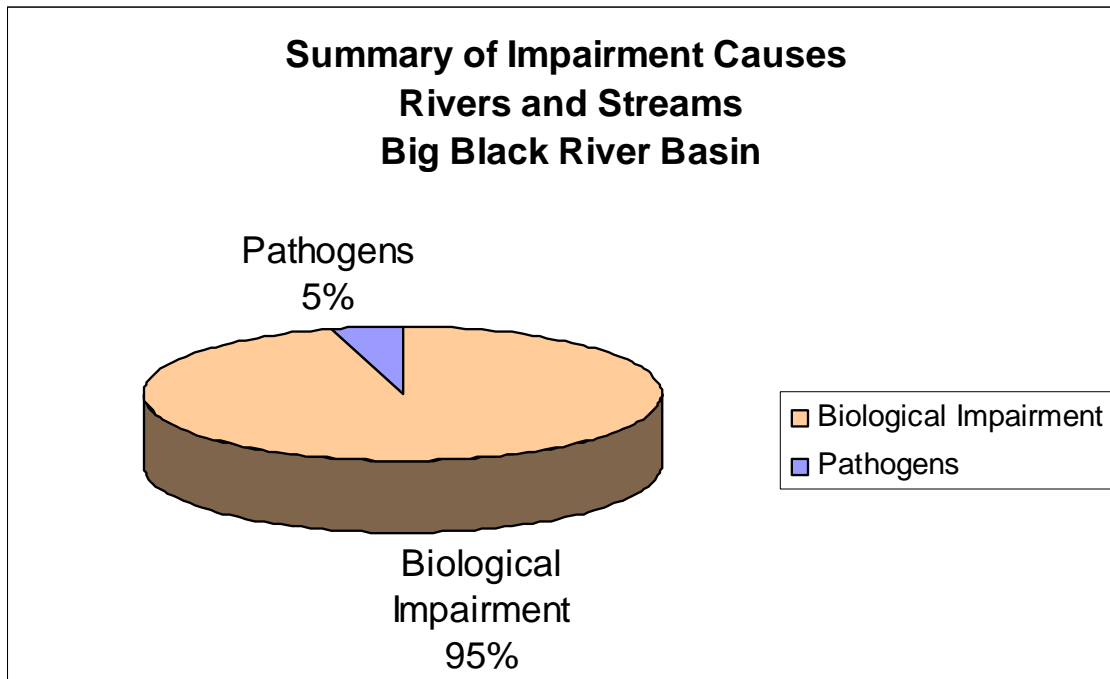
Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were determined for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 2 and Figure 7. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. For these impaired waters, the next step in the state's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. Other causes of impairment noted in the basin are from pathogens. The source of impairments for waters assessed in the Big Black River Basin is unknown. As above, the majority of impairment was determined to be biological and therefore sources of the impairment are yet to be determined.

Table 2: Summary of Impairment Causes-Big Black River Basin

Cause Categories	Total Miles
Biological Impairment*	339
Pathogens	16
Total	355

* Note: Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

**Figure 7: Summary of Impairment Causes for Perennial Rivers and Streams-Big Black River Basin**

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the Big Black River Basin's assessed stream and river miles, approximately 210 miles of perennial rivers and streams are attaining their aquatic life use, while 339 miles were assessed as not attaining and are considered impaired (Table 3 and Figure 8). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figure 9 depicts a geo-referenced coverage of the Aquatic Life Use Support assessments for the Big Black River Basin.

Table 3: Aquatic Life Use Support-Big Black River Basin

Status	Miles
Attaining	210
Unknown	1119
Total Not Attaining	339
TMDL not needed	36
TMDL needed	303
Total	1,668

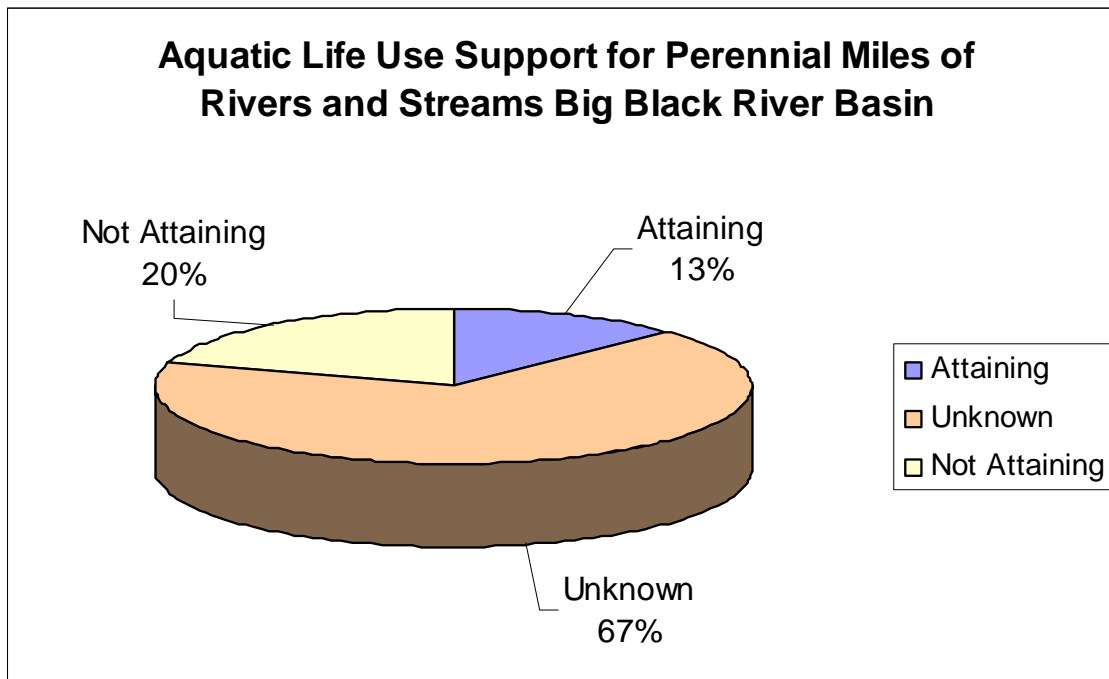


Figure 8: Aquatic Life Use Support-Big Black River Basin

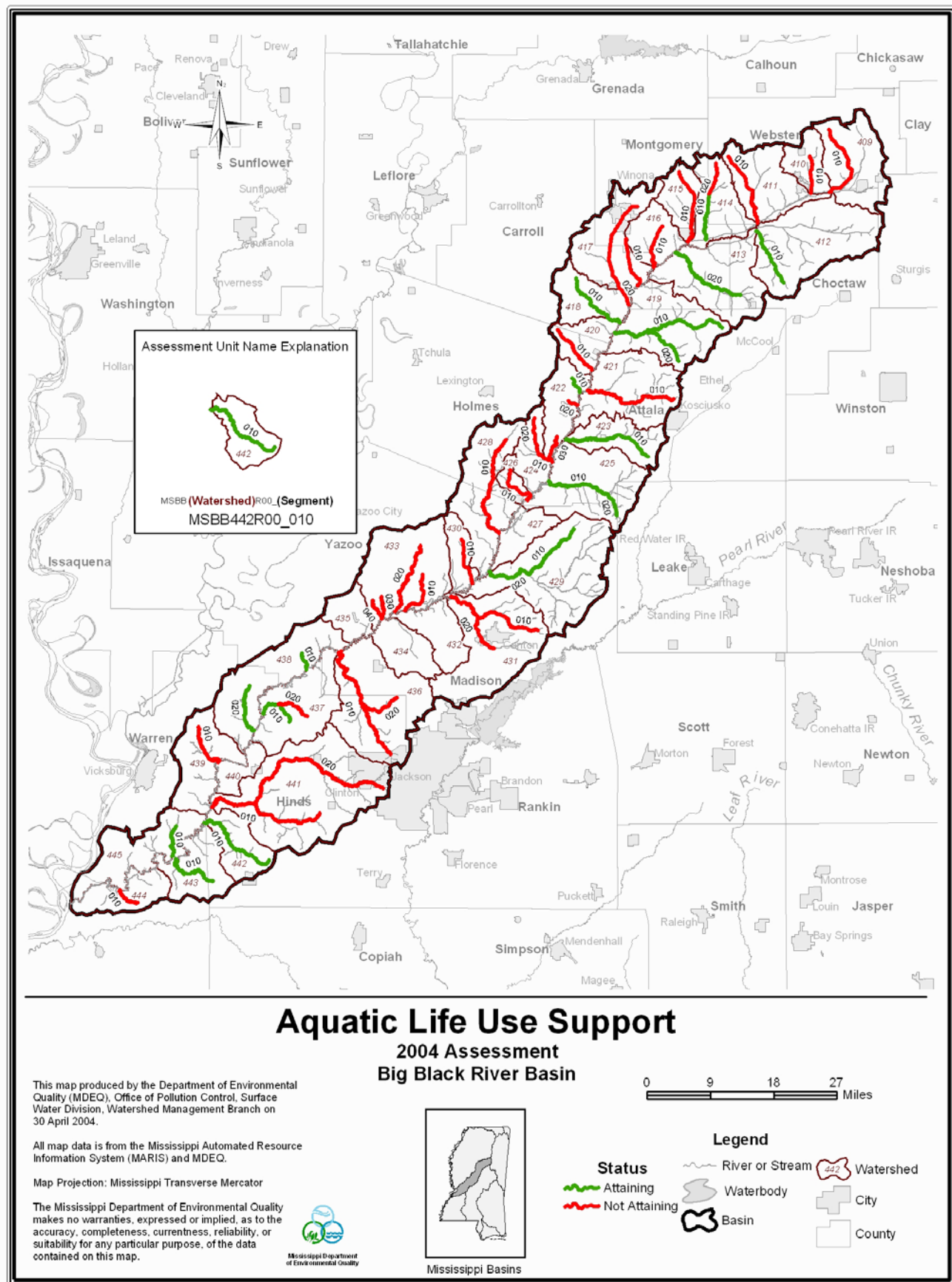


Figure 9: Aquatic Life Use Support Map-Big Black River Basin

Recreation Use Support

Data collected as part a statewide §303(d) fecal coliform project were used to make the Recreation Use Support assessments. Of the Big Black River Basin's assessed stream and river miles, approximately 60 miles of perennial rivers and streams are attaining their recreation use, while 16 miles were assessed as not attaining and are considered impaired (Table 4 and Figure 10). Figure 11 depicts a geo-referenced coverage of the Recreation Use Support assessments for the Big Black River Basin.

Table 4: Recreation Use Support-Big Black River Basin

Status	Miles
Attaining	60
Unknown	1592
Total Not Attaining	16
TMDL not needed	0
TMDL needed	16
Total	1,668

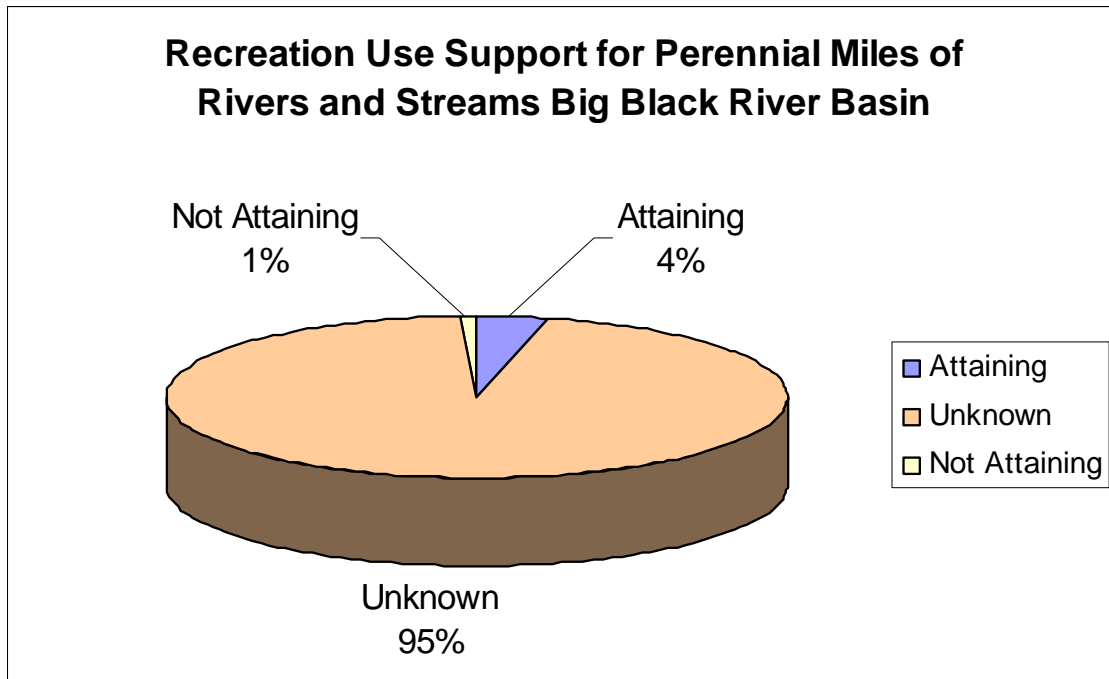


Figure 10: Recreation Use Support-Big Black River Basin

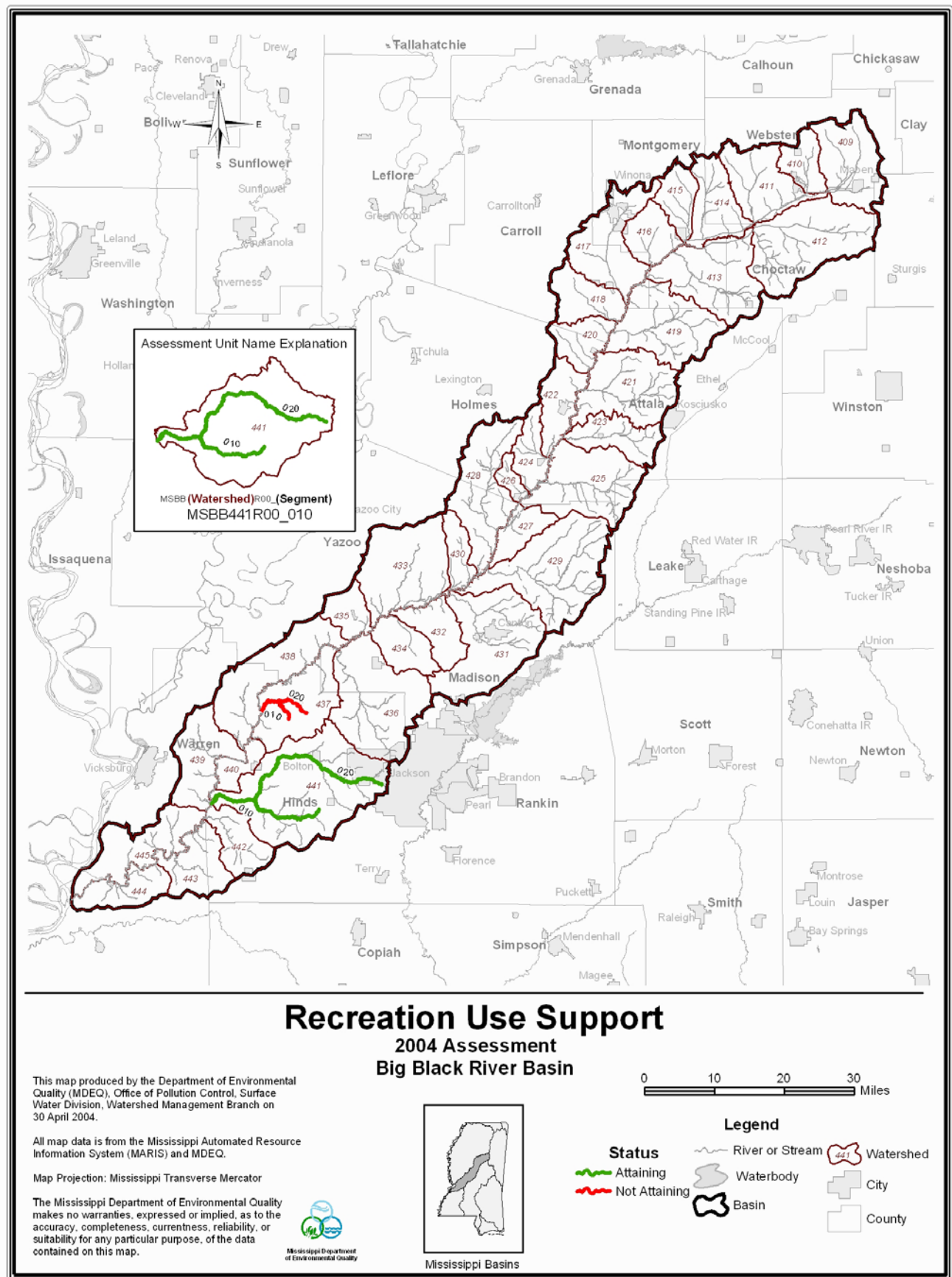


Figure 11: Recreation Use Support Map-Big Black River Basin

Table 5: 2004 §305(b) Assessed Water Bodies-Big Black River Basin

BIG BLACK RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
APOOKTA CREEK	MSBB421R00_010	MS421AE	Attala	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR DURANT FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
BAKERS CREEK	MSBB441R00_020	MS441BE	Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MORNING STAR FROM HEADWATERS TO MOUTH AT FOURTEEN MILE CREEK				Secondary Contact	Attaining
BEAR CREEK	MSBB438R00_020	N/A	Warren	Aquatic Life Support	Attaining
LOCATION: NEAR YOUNGTON FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
BEAR CREEK	MSBB431R00_020	MS431BE	Madison	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VIRILLIA FROM HEADWATERS AT WALNUT CREEK TO MOUTH AT BIG BLACK RIVER					
BEAVER CREEK	MSBB438R00_010	N/A	Yazoo	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
BETSY CREEK	MSBB417R00_010	MS417UE	Carroll, Montgomery	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WINONA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
BIG CYPRESS CREEK	MSBB428R00_010	MS428E	Holmes, Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VAUGHAN FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
BIG SAND CREEK	MSBB443R00_010	N/A	Claiborne, Hinds	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					

BIG BLACK RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BOGUE CHITTO CREEK	MSBB436R00_010	MS436M	Hinds, Madison, Yazoo	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
BOX CREEK	MSBB424R00_020	MS424BE	Holmes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GOODMAN FROM HEADWATERS TO MOUTH AT GREENS CREEK					
CALABRELLA CREEK	MSBB411R00_010	MS411E	Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PELLEZ FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER CANAL					
CLEAR CREEK	MSBB439R00_010	MS439E	Warren	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BOVINA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
COX CREEK	MSBB437R00_020	MS437E	Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR YOUNGTON FROM HEADWATERS TO MOUTH AT PORTER CREEK				Secondary Contact	Not Attaining
CYPRESS CREEK	MSBB433R00_020	MS433CE	Madison, Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BENTONIA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
DEER CREEK	MSBB433R00_010	MS433DE	Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BENTONIA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
DOAKS CREEK	MSBB429R00_020	N/A	Madison	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH HOBUCK CREEK TO MOUTH AT BIG BLACK RIVER					

BIG BLACK RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
ELLISON CREEK	MSBB430R00_010	MS430E	Madison, Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WAY FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
FIVE MILE CREEK	MSBB442R00_010	N/A	Claiborne, Hinds, Warren	Aquatic Life Support	Attaining
LOCATION: NEAR NEWMAN FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
FOURTEEN MILE CREEK	MSBB441R00_010	MS441FE	Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR NEWMAN FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER				Secondary Contact	Attaining
GREENS CREEK	MSBB424R00_010	MS424BE	Attala, Holmes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GOODMAN FROM CONFLUENCE WITH BOX CREEK TO MOUTH AT BIG BLACK RIVER					
HAMER BAYOU	MSBB445R00_010	N/A	Claiborne, Warren	Aquatic Life Support	Attaining
LOCATION: NEAR VICKSBURG FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
HAYS CREEK	MSBB417R00_020	MS417HE	Carroll, Montgomery	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VAIDEN FROM CONFLUENCE WITH BOX CREEK TO MOUTH AT BIG BLACK RIVER					
HOBUCK CREEK	MSBB429R00_010	N/A	Madison	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT DOAKS CREEK					
HOWARD CREEK	MSBB422R00_010	N/A	Attala, Holmes	Aquatic Life Support	Attaining
LOCATION: NEAR DURANT FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					

BIG BLACK RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
INDIAN CREEK	MSBB422R00_020	MS422IE	Attala, Holmes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GOODMAN FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
INDIAN CREEK	MSBB433R00_040	MS433IE	Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BENTONIA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
JACK LAKE CREEK	MSBB422R00_030	MS422JE	Holmes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GOODMAN FROM HEADWATERS TO MOUTH AT BOX CREEK					
JORDAN CREEK	MSBB420R00_010	MS420JE	Holmes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HOFFMAN FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
KENNISON CREEK	MSBB444R00_010	MS444E	Claiborne, Warren	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GALLOWAY FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
LEWIS CREEK	MSBB416R00_010	MS416LE	Carroll, Montgomery	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR POPLAR SPRINGS FROM HEADWATERS INCLUDING EAST FORK TO MOUTH AT BIG BLACK RIVER					
LIMEKILN CREEK	MSBB436R00_020	MS436M	Hinds	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: FROM HEADWATERS TO MOUTH AT BOGUE CHITTO CREEK					
LITTLE BLACK CREEK	MSBB410R00_010	MS410E	Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR EUPORA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER CANAL					

BIG BLACK RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LONG CREEK	MSBB423R00_010	N/A	Attala, Holmes	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
MCCURTAIN CREEK	MSBB412R00_010	MS412ME	Choctaw	Aquatic Life Support	Attaining
LOCATION: NEAR PELLEZ FROM HEADWATERS TO MOUTH AT BIG BYWY DITCH					
MULBERRY CREEK	MSBB415R00_010	MS415E	Montgomery	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SIBLEYTON FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
OUSLEY CREEK	MSBB425R00_020	N/A	Attala, Madison	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT SENEASHA CREEK					
PEACHAHALA CREEK	MSBB418R00_010	N/A	Attala, Carroll	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
POPLAR CREEK	MSBB413R00_020	MS413PE	Choctaw, Montgomery	Aquatic Life Support	Attaining
LOCATION: NEAR POPLAR SPRINGS FROM CONFLUENCE WITH DOWNINGS BRANCH TO MOUTH AT BIG BLACK RIVER					
PORTER CREEK	MSBB437R00_010	MS437PE	Hinds, Warren	Aquatic Life Support	Attaining
LOCATION: NEAR YOUNGTON FROM HEADWATERS TO MOUTH AT THE BIG BLACK RIVER				Secondary Contact	Not Attaining
SCOOBACHITA CREEK	MSBB419R00_020	N/A	Attala	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT ZILPHA CREEK					

BIG BLACK RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
SENEASHA CREEK	MSBB425R00_010	N/A	Attala	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS AT THE CONFLUENCE OF FISHERS AND OUSLEY CREEKS TO THE MOUTH AT THE BIG BLACK RIVER					
SPRING CREEK	MSBB409R00_010	MS409SE	Choctaw, Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SAPA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
TACKETT CREEK	MSBB426R00_010	MS426E	Holmes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PICKENS FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
TILDA BOGUE	MSBB431R00_010	MS431TE	Madison	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VIRILILIA FROM HEADWATERS TO MOUTH AT BEAR CREEK					
WALESHEBA CREEK	MSBB433R00_030	MS433WE	Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BENTONIA FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					
WOLF CREEK	MSBB414R00_010	N/A	Montgomery, Webster	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH PATT'S BRANCH TO MOUTH AT BIG BLACK RIVER CANAL					
WOLF CREEK	MSBB414R00_020	MS414WE	Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH PATTS BRANCH					
ZILPHA CREEK	MSBB419R00_010	N/A	Attala, Carroll	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BIG BLACK RIVER					

COASTAL STREAMS BASIN

Basin Description

The Coastal Streams Basin area, located in south Mississippi, begins in Lamar County and extends southward with its western boundary being the Pearl River and the eastern



boundary, with the exception of the mouth of the Pascagoula River, being the Alabama state line. Comprising all or part of six counties, the Coastal Streams system drains an area of about 1,545 square miles and empties into the Gulf of Mexico. The Coastal basin also includes the Mississippi Sound and the barrier islands: Cat, Ship, Deer, Horn, Round, and Petit Bois Islands (Figure 12).

Figure 12: Coastal Streams Basin (MDEQ)

The topography ranges from extensive pine forests and low rolling hills in the upper part of the basin to low-lying flatlands and salt marsh on the coast. Major population centers and urban areas include Biloxi, Gulfport, Bay St. Louis, Pass Christian, Ocean Springs, and Pascagoula and are confined along the coast.

The Coastal Streams Basin has an estimated population of 426,231 and encompasses roughly one-fifth of Mississippi's population. The basin is predominantly rural with an average population density of around 137 people per square mile. Greater population densities are found near the urban areas along the coast. Population in the Coastal Streams Basin has shown a steady growth over the past 30 years, mainly occurring in the urban areas. This growth has accelerated greatly in recent years for the three coastal counties due to the economic impacts of the casino industry.

Land Use

The Coastal Streams Basin is one of the most unique areas of the state. The inland areas of this basin are predominately rural with agriculture and silviculture being the major land uses, while the area along the coast has heavy urban, industrial, and recreational developments. Commercial and recreational fisheries, gaming, tourism, energy production, manufacturing, and shipping are all components of a vibrant coastal economy. Land uses are identified in Figure 13.

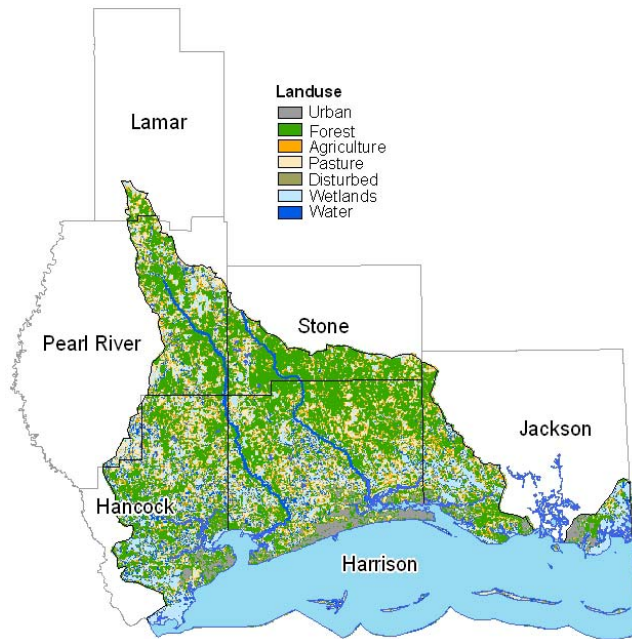
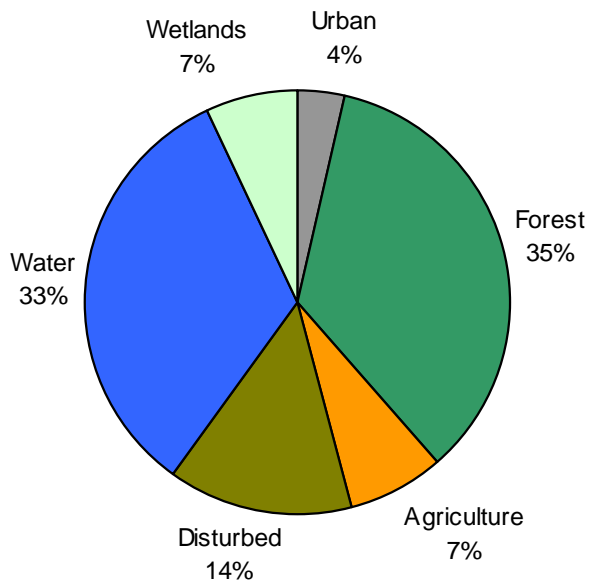


Figure 13: Major Land Cover in the Coastal Streams Basin (MARIS)

Forests dominate the land cover, with 35 percent of the basin covered by forest (Figure 14). *Urban* uses (i.e., towns and cities) make up 4% of the Coastal Streams Basin area. However, 56 % of the Basin population is concentrated in these urban areas.



Agricultural area comprises 7% and includes croplands and pastures. *Water* sources, which include streams, lakes, reservoirs and estuaries make up 33% of the land cover while *Wetlands*, which includes forested and non-forested freshwater wetlands and coastal marsh, comprise 7% of the basin. *Disturbed areas* (strip mines, gravel pits, sandy areas, barren, and transitional areas) make up 14% of the land use in the basin.

Figure 14: Distribution of Land Cover in the Coastal Streams Basin (MARIS)

Water Resources

The Coastal Streams Basin has a total of 2,442 miles of perennial and intermittent rivers and streams. According to the State's water quality standards, the majority of these water bodies are classified as Fish and Wildlife streams. However; portions of the Jourdan and Wolf Rivers and all of the Tchoutacabouffa River and Tuxachanie Creek are classified for Recreation and thus intended to be suitable for extensive water contact recreational activities. Typically streams and rivers in this basin are shallow and clear, with moderate flow in the upper reaches and gradually become wider and deeper with more sluggish flow toward the coast due to tidal influence and the change in topography. Many streams in this area of the state are also referred to as "blackwater streams" because they are stained by tannic acid leached from local vegetation

Mississippi's largest estuary, the Mississippi Sound, is located within the Coastal Streams Basin. The Mississippi Sound is a relatively shallow, elongated estuary separated from the Gulf of Mexico and bounded offshore by a string of barrier islands: Cat, Ship, Horn, and Petit Bois. To the north, the Sound is bordered by small bays, marshes, bayous, rivers and coastal beaches.

The Mississippi Sound is an estuary that is largely a product of the rivers that feed it. Freshwater inputs replenish nutrients and sediments that play a critical role in maintaining the abundant productivity of Mississippi coastal waters and extensive salt marsh habitats bordering the estuaries of the Sound. The sediment maintains the salt marsh habitat that in turn regulates the discharge of nutrients to coastal waters as a pollutant filter. Suspended sediments deposited by the freshwater inputs are hydraulically restricted due to the barrier islands. The barrier islands combined with the shallow wind-mixed waters of the Sound (which promote re-suspension of sediments) give the Mississippi Sound its characteristic brownish color.

Evolution of coastal wetland habitats through historical and pre-historical times has largely shaped the Mississippi coastal environment into what we see today. In addition to the prolific productivity and filtering capabilities of wetlands, the physiography that they create is also beneficial. Protective bays and shallows are important habitats for seagrass, oysters, fish and shellfish. These landforms have evolved through time based primarily on the sediments carried by the rivers. Coastal erosion, river meandering or capture, coastal development, and changes in river transport have markedly affected the size and effectiveness of Mississippi's marsh habitats. The total coastal marsh (below the 15ft contour) within Mississippi's Coastal Streams River Basin is approximately 28,000 acres, making up roughly 50 percent of the total marsh habitat in Coastal Mississippi.

In terms of biological resources, the Gulf Sturgeon and the Swallow-tailed Kite can be found here as well as many more species. The Coastal Streams Basin has 16 federally listed threatened and/or endangered species as a whole. This basin also includes several waters proposed as candidates for Mississippi Natural and Scenic Waterways System water bodies: Wolf River, Biloxi River, Jourdan River, and Tchoutacabouffa River.

Surface Water Assessment

Designated Use Support

The assessments for the Coastal Streams Basin were made based on data from 27 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project (M-BISQ) and the §303(d) fecal coliform monitoring project (Figure 15). The perennial streams where the monitoring stations were located represented the mainstem drainage for each 11-digit watershed in the basin. Use support status for the basin is presented and summarized with causes and sources of impairment in the following text.

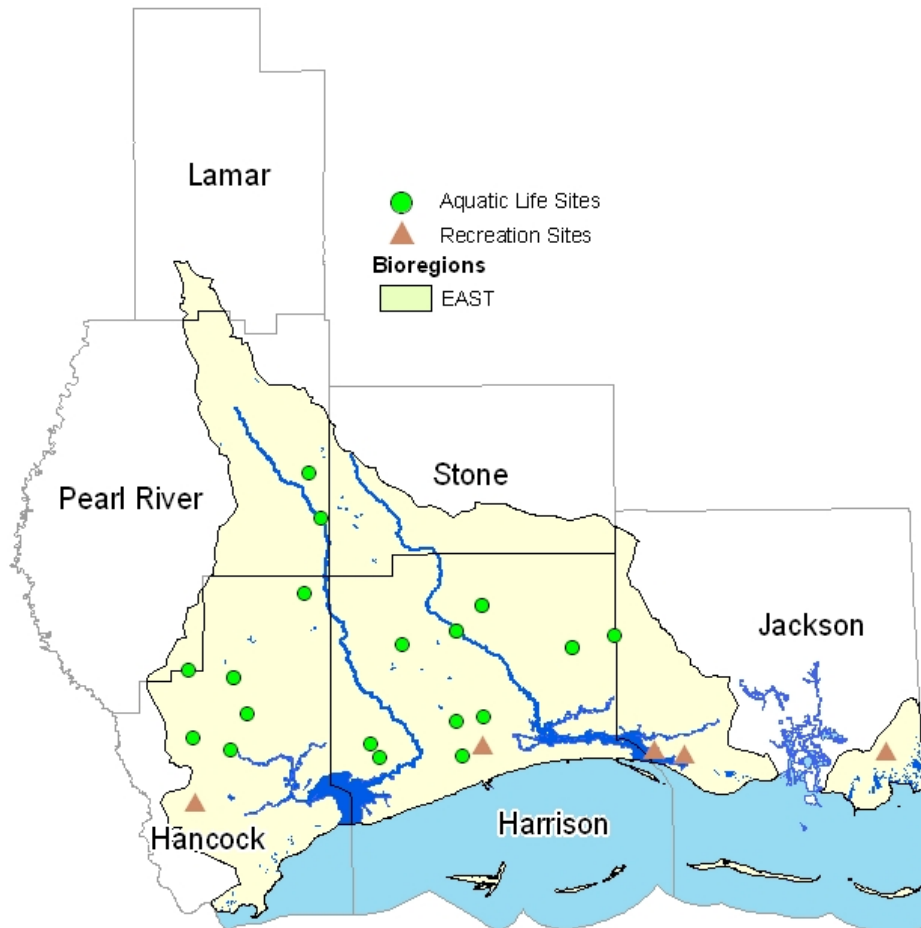


Figure 15: Coastal Streams Basin Monitoring Stations and M-BISQ Bioregions

MDEQ assessed approximately 20% (261 miles) of the total 1,313 perennial miles of streams and rivers in the Coastal Streams Basin. The status of water quality on the remaining 79% (1,051 miles) of the basin's perennial rivers and streams is unknown. The majority of stream miles (46%) in the Coastal Streams Basin is composed of intermittent streams and therefore is not readily assessable.

For the 2004 §305(b) report, MDEQ only assessed Mississippi's estuaries and coastal waters for the Shellfish Consumption use. During this §305(b) reporting period, extensive monitoring was carried out by MDEQ and other agencies in Mississippi estuaries and coastal waters through a combination of ambient fixed station monitoring and special studies. In fact, since 2000, MDEQ has been participating in EPA's National Coastal Assessment (NCA) Program whose probabilistic design will enable assessment of 100% of Mississippi's estuarine and coastal resources. Information and data analysis for the NCA data pertinent to the 2004 assessment were not available from EPA at the time of this §305(b) report development. EPA has published a report, *National Coastal Condition Report* (EPA 2001), with data analysis for the first year of sampling information for the Gulf of Mexico as a whole. As a result of this regional analysis, there were several indications of possible isolated water quality problems in Mississippi's coastal waters. All available NCA data were reviewed for compelling evidence of impairment indicative of obvious or catastrophic environmental condition as specified by CALM but none of the data to date indicate conclusive evidence of impairment. When the NCA project is completed in 2005, data collected in Mississippi's estuaries will be assessed in their entirety and pollution sources will be addressed. At that time, a comprehensive assessment of Mississippi's estuaries and coastal waters will be possible.

For this report, MDEQ assessed the Shellfish Consumption Use for coastal waters based on information provided by MDMR from the National Shellfish Sanitation Program in Mississippi. MDEQ also reviewed data from the MDEQ Beach Monitoring Program for compelling evidence of water quality conditions indicative of catastrophic or obvious public health impacts but none were found. There is currently one fish advisory active on the waters in the Coastal Streams Basin. This is a "blanket" advisory for the consumption of king mackerel in the Gulf of Mexico due to mercury. For complete information on advisories, see Part III Public Health Concerns and Advisories in the 2004 §305(b) report.

A summary of use support for the assessed rivers and streams in the Coastal Streams Basin is found in Table 6 and Figure 16. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

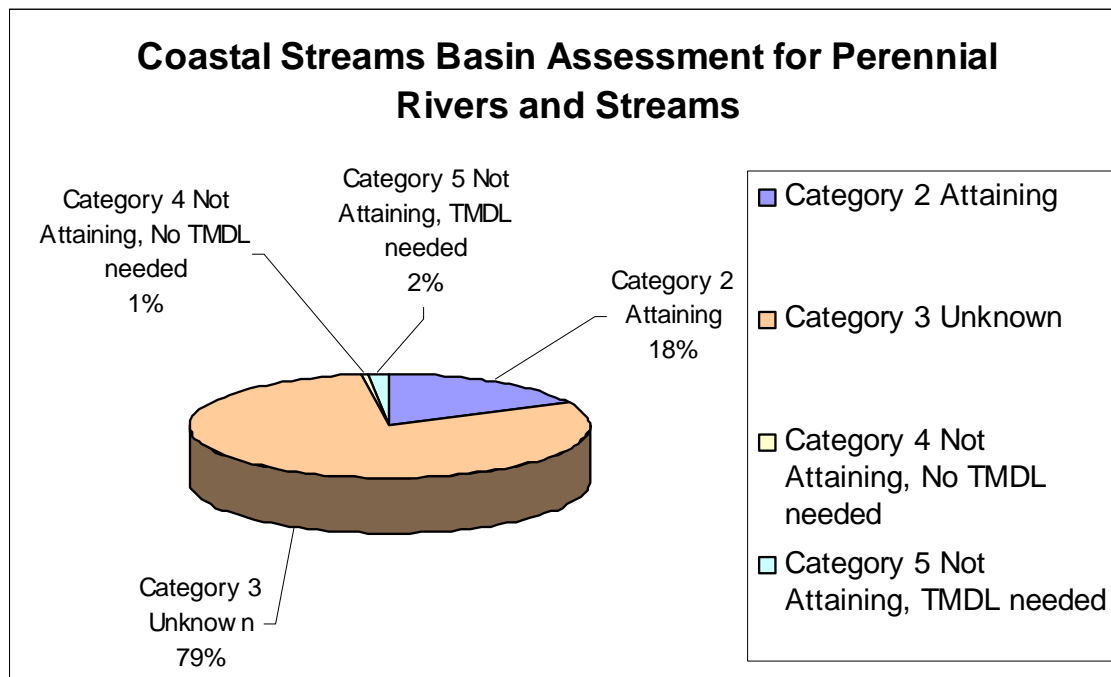
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the Coastal Streams Basin, approximately 18% are in category 2 for attaining some uses but unknown for remaining water body uses, and 1% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 2% of the assessed water bodies. The status of the remaining 79% of water bodies in the Coastal Streams Basin is unknown and these waters are reflected in category 3. All of the waters in category 5 (21 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the Coastal Streams Basin section of the 2004 §303(d) list. Please refer to Table 10 at the end of this section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 6: Summary of Coastal Streams Basin Use Support Assessments-River and Stream Miles

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	233
Category 3: Unknown/Insufficient Data for Assessment	2,181
Intermittent Miles	1,130
Perennial Miles	1,051
Category 4: Not Attaining – No TMDL Needed	7
A. TMDL Completed	7
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	21
A. Pollutant Identified	0
B. Biological Impairment- Cause Unknown	21
Total Miles	2,442

**Figure 16: Coastal Streams Basin Assessment of Perennial Rivers and Streams**

Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were evaluated for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 7 and Figure 17. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause is undetermined. For these impaired waters, the next step in the state's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. Other causes of impairment noted in the basin are from pathogens. The source of pollution causing impairment for the Coastal Streams basin is unknown. As above, the majority of impairment was determined to be biological and therefore sources of the impairment are yet to be determined.

Table 7: Summary of Impairment Causes-Coastal Streams Basin

Cause Categories	Total Miles
Biological Impairment*	21
Pathogens	9

* Note: Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

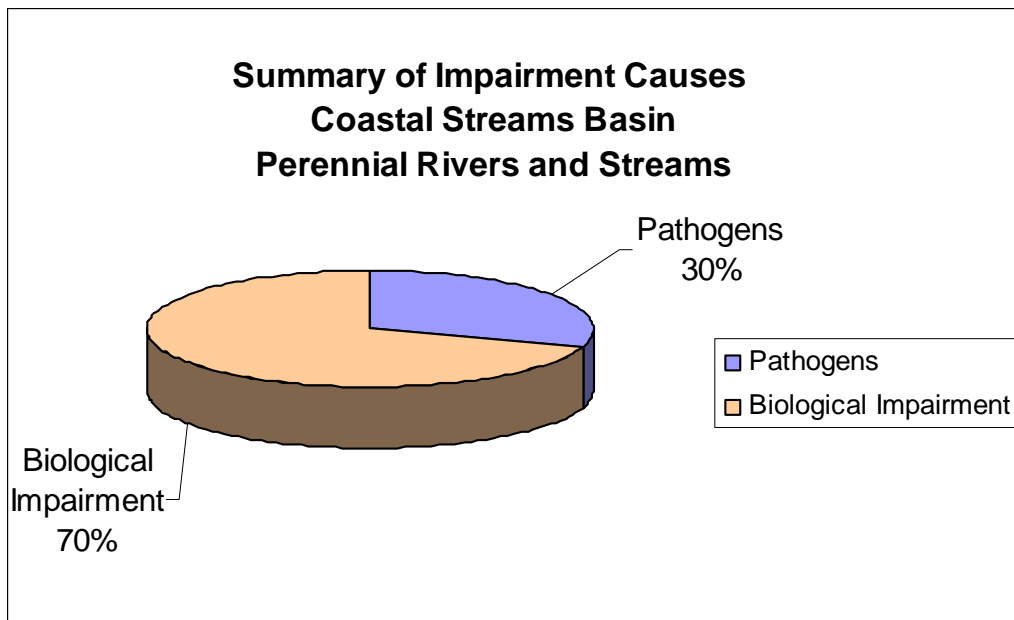


Figure 17: Summary of Impairment Causes for Perennial Rivers and Streams-Coastal Streams Basin

Aquatic Life Use Support

As stated earlier, all of the ALUS assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the Coastal Streams Basin's assessed stream and river miles, approximately 223 miles of perennial rivers and streams are attaining their aquatic life use, while 22 miles were assessed as not attaining and are considered impaired (Table 8 and Figure 18). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figure 19 depicts a geo-referenced coverage of the Aquatic Life Use Support assessments for the Coastal Streams Basin.

Table 8: Aquatic Life Use Support-Coastal Streams Basin

Status	Miles
Attaining	223
Unknown	1,068
Total Not Attaining	22
TMDL not needed	0
TMDL needed	22
Total	1,313

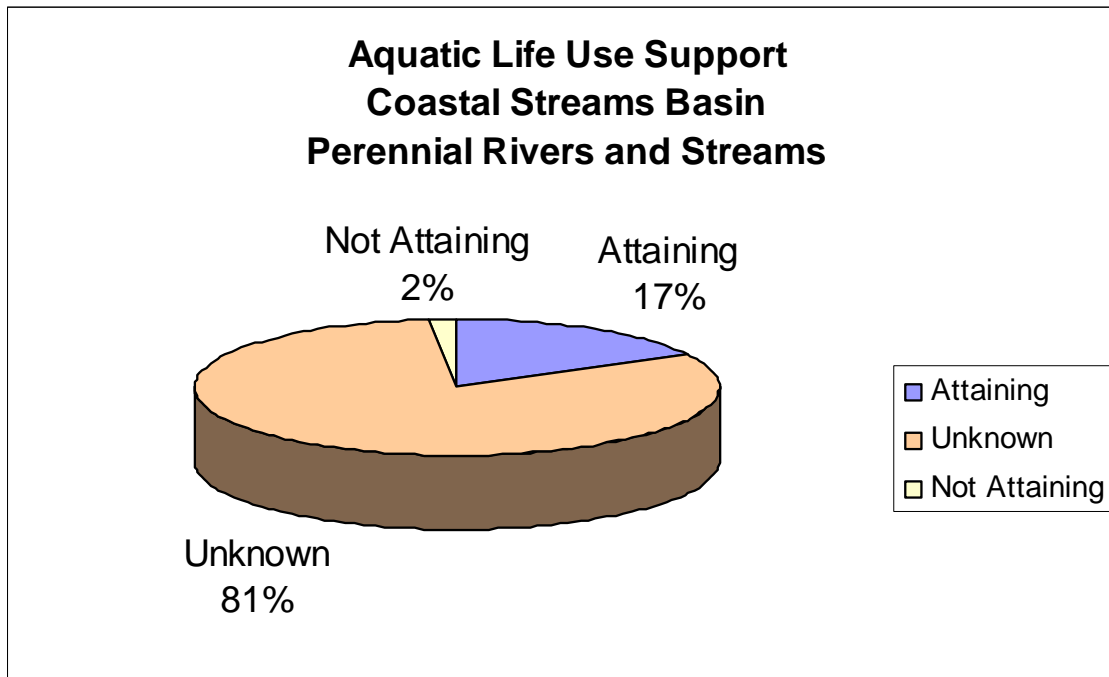


Figure 18: Aquatic Life Use Support-Coastal Streams Basin

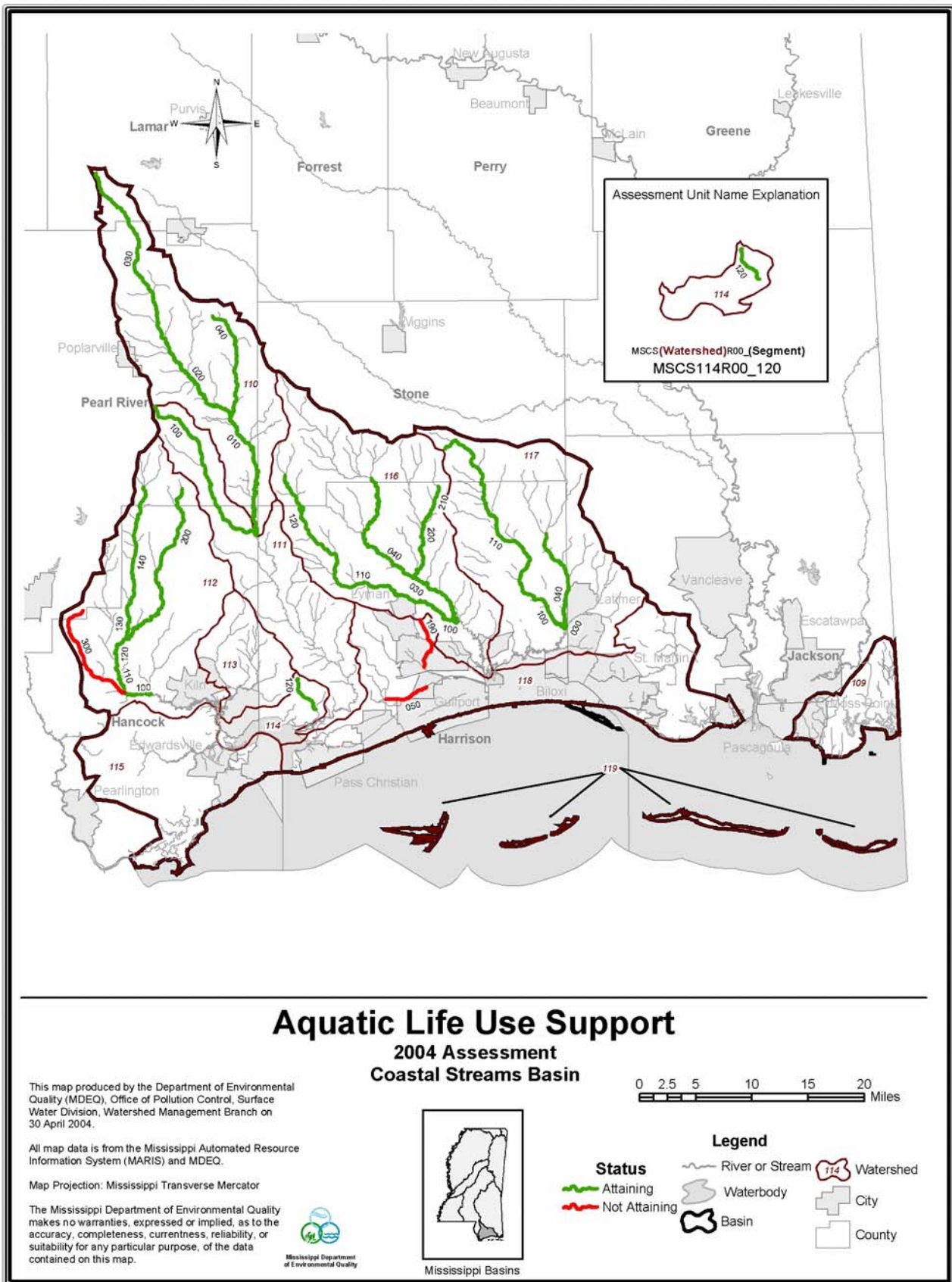


Figure 19: Aquatic Life Use Support Map-Coastal Streams Basin

Recreation Use Support

Data collected as part a statewide §303(d) fecal coliform project were used to make Recreation Use Support assessments. Of the Coastal Streams Basin's assessed stream and river miles, approximately 12 miles of perennial rivers and streams are attaining their recreation use, while 9 miles were assessed as not attaining and are considered impaired (Table 9 and Figure 20). Figure 21 depicts a geo-referenced coverage of the Recreation Use Support assessments for the Coastal Streams Basin.

Table 9: Recreation Use Support-Coastal Streams Basin

Status	Miles
Attaining	12
Unknown	1,292
Total Not Attaining	9
TMDL not needed	9
TMDL needed	0
Total	1,313

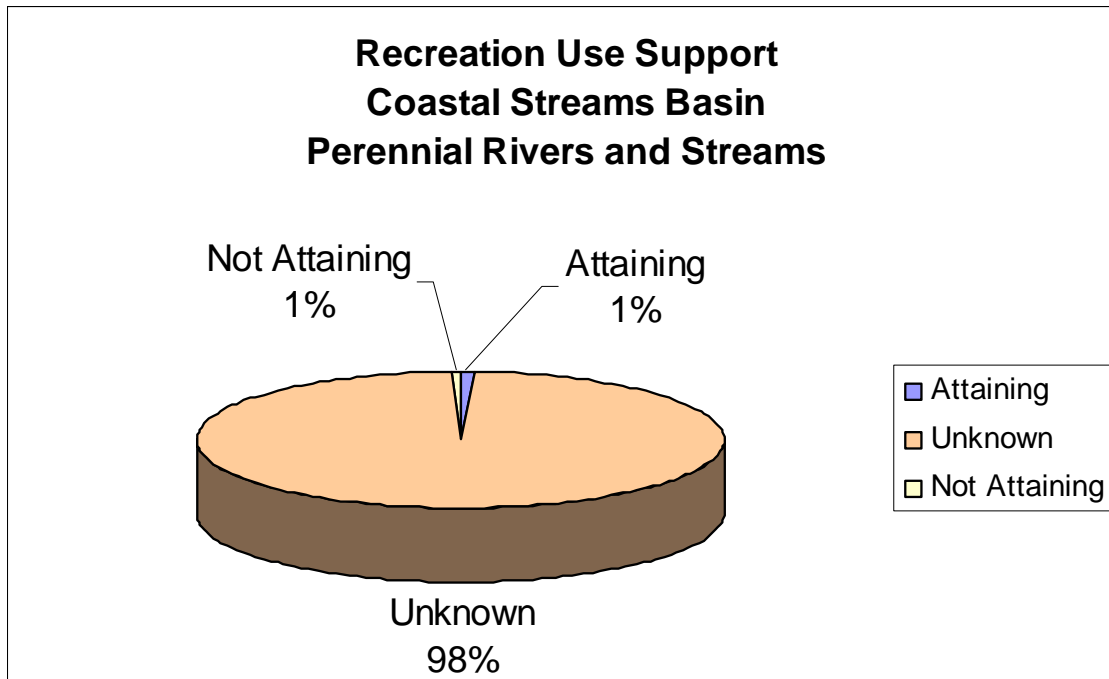


Figure 20: Recreation Use Support-Coastal Streams Basin

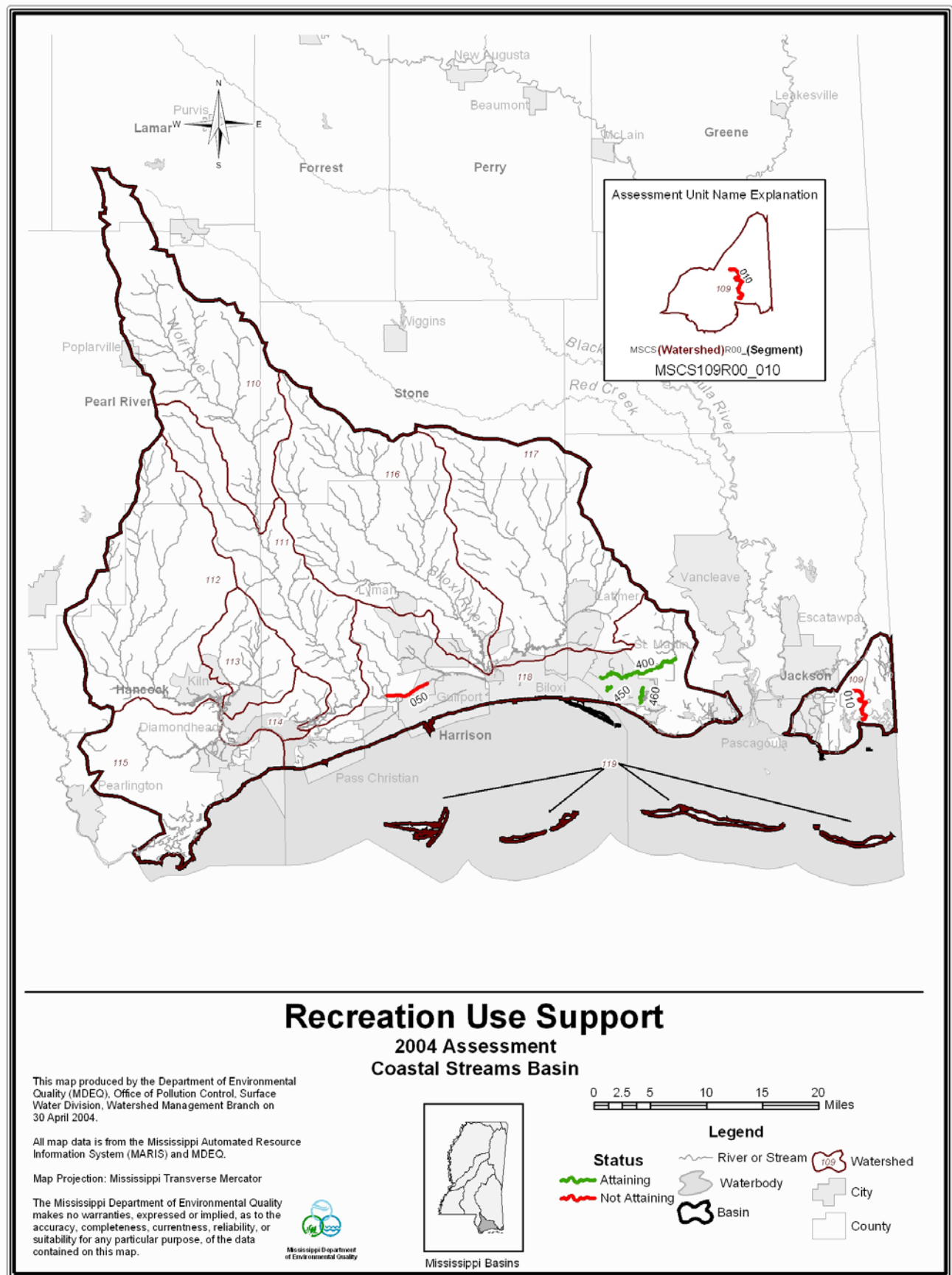


Figure 21: Recreation Use Support Map-Coastal Streams Basin

Shellfish Consumption Use Support

Data collected and analyzed as part of the National Shellfish Sanitation Program by MDMR were used to make the Shellfish Consumption Use Support assessments. Of the Coastal Streams Basin's assessed coastal and estuarine square miles classified for Shellfish Harvesting, approximately 9 square miles are attaining their Shellfish Consumption Use, while 28 square miles are not attaining and are considered impaired. Pathogen TMDLs have been completed for the 28 square miles that were assessed as not meeting the Shellfish Consumption Use. For more information on the status of Mississippi's shellfish harvesting waters, refer to MDMR's website: www.dmr.state.ms.us.

Table 10: 2004 §305(b) Assessed Water Bodies-Coastal Streams Basin

COASTAL STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BILOXI BAY	MSCS118EX1_020	MS118E03M	Jackson	Shellfishing	Not Attaining, TMDL Completed
LOCATION: AT BILOXI AND OCEAN SPRINGS FROM NEW HWY 90 BRIDGE TO ARBITRARY LINE FROM SE TIP OF DEER ISLAND TO BELLE FONTAINE POINT.					
BILOXI RIVER	MSCS116R00_030	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH SAUCIER CREEK TO CONFLUENCE WITH LITTLE BILOXI RIVER.					
BILOXI RIVER	MSCS116R00_040	N/A	Harrison, Stone	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH SAUCIER CREEK.					
CATAHOULA CREEK	MSCS112R00_140	N/A	Hancock, Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO HWY 43 DOWNSTREAM OF CONFLUENCE WITH DEVIL'S BRANCH					
CATAHOULA CREEK	MSCS112R00_100	N/A	Hancock	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH DEAD TIGER CREEK TO CONFLUENCE WITH BAYOU BACON					
CATAHOULA CREEK	MSCS112R00_120	N/A	Hancock	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH HICKORY CREEK TO CONFLUENCE WITH MILL CREEK.					
CATAHOULA CREEK	MSCS112R00_110	N/A	Hancock	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH MILL CREEK TO CONFLUENCE WITH DEAD TIGER CREEK.					
CATAHOULA CREEK	MSCS112R00_130	N/A	Hancock	Aquatic Life Support	Attaining
LOCATION: FROM HWY 43 DOWNSTREAM OF CONFLUENCE WITH DEVIL'S BRANCH TO CONFLUENCE WITH HICKORY CREEK.					

COASTAL STREAMS

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
CRANE CREEK	MSCS111R00_100	N/A	Hancock, Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS NEAR SAVANNAH TO MOUTH AT WOLF RIVER.					
CUMBEST BAYOU	MSCS109R00_010	MS109CUM	Jackson	Primary Contact (Recr)	Not Attaining, TMDL Completed
LOCATION: FROM HEADWATERS ABOVE CONFLUENCE WITH CANAL TO MOUTH AT POINT AUX CHENES BAY.				Shellfishing	Not Attaining, TMDL Completed
DE LISLE BAYOU	MSCS114R00_120	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS ABOVE I-10 TO UNNAMED TRIB. ABOVE LO BUOI ROAD.					
DEAD TIGER CREEK	MSCS112R00_300	MS112DT	Hancock, Pearl River	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR KILN FROM HEADWATERS TO CONFLUENCE WITH CATAHOULA CREEK					
FLAT BRANCH	MSCS118R00_190	MS118F	Harrison	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GULFPORT FROM HEADWATERS TO MOUTH AT BERNARD BAYOU					
HENDERSON PASS REEF	MSCS119EX1_040	N/A	Harrison	Shellfishing	Attaining
LOCATION: PASS CHRISTIAN REEF AND HENDERSON PASS REEF NORTH OF SQUARE HANKKERCHIEF SHOAL					
HERON BAYOU	MSCS118R00_460	N/A	Jackson	Secondary Contact	Attaining
LOCATION: FROM HEADWATERS NEAR OCEAN SPRINGS TO MOUTH AT DAVIS BAYOU.					
HICKORY CREEK	MSCS112R00_200	N/A	Hancock, Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT CATCHOULA CREEK.					

COASTAL STREAMS

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LITTLE BILOXI RIVER	MSCS116R00_100	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM 1 MILE EAST OF HWY 49 AT UNNAMED LAKE OFF W. SMITH ROAD TO MOUTH AT BILOXI RIVER.					
LITTLE BILOXI RIVER	MSCS116R00_110	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH BULLY CREEK TO 1 MILE EAST OF HWY 49 AT UNNAMED LAKE.					
LITTLE BILOXI RIVER	MSCS116R00_120	N/A	Harrison, Stone	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS NEAR SILVER RUN TO CONFLUENCE WITH BULLY CREEK.					
MURDER CREEK	MSCS110R00_040	N/A	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS NEAR SILVER RUN TO MOUTH AT WOLF RIVER.					
OLD FORT BAYOU	MSCS118R00_400	N/A	Jackson	Primary Contact (Recr)	Attaining
LOCATION: AT OCEAN SPRINGS FROM HEADWATERS TO WASHINGTON ST. BRIDGE					
PASS MARIANNE REEF	MSCS119EX1_200	N/A	Harrison	Shellfishing	Attaining
LOCATION: NEAR SQUARE HANDKERCHIEF SHOAL SOUTH OF PASS CHRISTIAN					
SAUCIER CREEK	MSCS116R00_200	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH WEST CREEK TO MOUTH AT BILOXI RIVER.					
SAUCIER CREEK	MSCS116R00_210	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS NEAR AIREY AT MARTHA REDMAN ROAD TO CONFLUENCE WITH WEST CREEK.					

COASTAL STREAMS

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
ST. LOUIS BAY	MSCS114E01_010	N/A	Hancock	Shellfishing	Not Attaining, TMDL Completed
LOCATION: AT BAY ST. LOUIS FROM INLAND BOUNDARY TO MOUTH AT MS SOUND.					
TCHOUTABOUFFA RIVER	MSCS117R00_030	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH BAYOU COSTAPIA TO CONFLUENCE WITH TUXACHANIE					
TCHOUTABOUFFA RIVER	MSCS117R00_040	N/A	Harrison, Jackson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS AT HURRICANE CREEK CONFLUENCE TO CONFLUENCE WITH BAYOU COSTAPIA					
TELEGRAPH REEF	MSCS119EX1_300	N/A	Harrison	Shellfishing	Attaining
LOCATION: NEAR SQUARE HANDKERCHIEF SHOAL SOUTH OF PASS CHRISTIAN					
TIDEWATER BAYOU	MSCS118R00_450	N/A	Jackson	Primary Contact (Recr)	Attaining
LOCATION: FROM INLAND BOUNDARY AT KENSINGTON AVENUE BRIDGE TO MOUTH AT BILOXI BAY.					
TURKEY CREEK	MSCS118R00_050	MS118BBM1	Harrison	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE WITH CANAL NUMBER 2 TO HWY 49 BRIDGE.				Secondary Contact	Not Attaining, TMDL Completed
TUXACHANIE CREEK	MSCS117R00_100	N/A	Harrison	Aquatic Life Support	Attaining
LOCATION: FROM NORTH CARR BRIDGE ROAD TO CONFLUENCE WITH TCHOUTABOUFFA RIVER.					
TUXACHANIE CREEK	MSCS117R00_110	N/A	Harrison, Stone	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS NEAR MCHENRY TO NORTH CARR BRIDGE ROAD					

COASTAL STREAMS

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
WOLF CREEK	MSCS110R00_030	N/A	Lamar, Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS AT CONFLUENCE OF HICKORY AND WOLF CREEKS TO CONFLUENCE WITH BEAVERDAM CREEK AND POPLAR SPRINGS BRANCH AT HWY 26					
WOLF RIVER	MSCS110R00_010	N/A	Hancock, Pearl River, Stone	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH MURDER CREEK TO WATERSHED BOUNDARY AT CONFLUENCE WITH CRANE CREEK.					
WOLF RIVER	MSCS110R00_020	N/A	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH BEAVERDAM CREEK AND POPLAR SPRINGS BRANCH AT HWY 26 TO CONFLUENCE WITH MURDER CREEK.					

NORTH INDEPENDENT STREAMS BASIN

Basin Description

The North Independent Streams Basin is located in north Mississippi and consists of those streams which primarily drain into the State of Tennessee. This basin comprises all or part of 7 counties in north Mississippi (Figure 22). Major streams in the basin include the Tuscumbia River, Horn Lake Creek, Muddy Creek, Wolf River, and Hatchie River.

The uniqueness of this basin is that, for its small area, it is composed of portions of four physiogeographic sub-regions: Loess Bluffs, Red Clay Hills, Flatwoods, and Pontotoc Ridge. Most of the region is made up of low to high, rolling hills and is largely forested. The two largest urban areas in the basin are located on opposite ends with Southhaven, a suburb of Memphis, TN, on the west and the city of Corinth on the east.

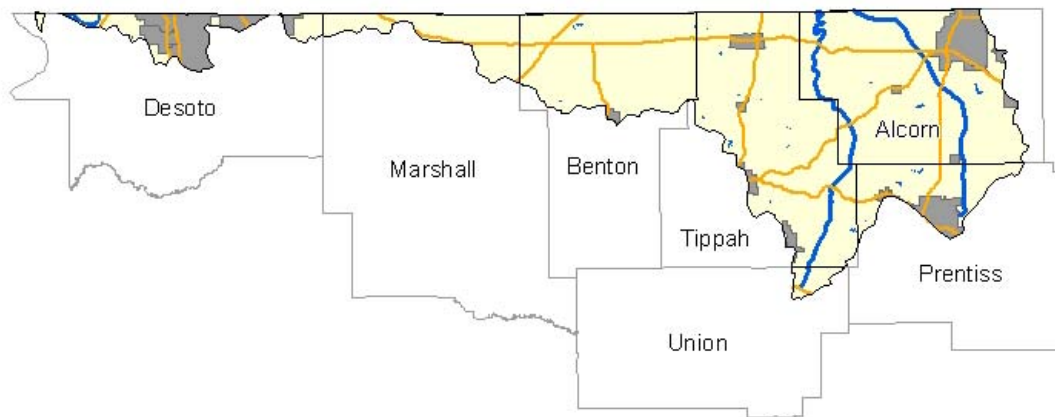


Figure 22: North Independent Streams Basin (MDEQ)

The population for the counties within the North Independent Streams Basin was estimated in 2000 at approximately 182,000. There has been a 43% increase in population since 1990 with almost all the growth in DeSoto County. The largest county populations are found in DeSoto (the fastest growing county in the state) and Alcorn counties around the cities of Southhaven and Corinth, respectively.

Land Use

The primary land use in the North Independent Streams Basin is forestry (silviculture). The next principal land use in the North Independent Streams Basin is agriculture with some concentrated areas of industry around the cities of Southhaven, Olive Branch, and Corinth. A depiction of the major land cover in the basin is given in Figure 23.

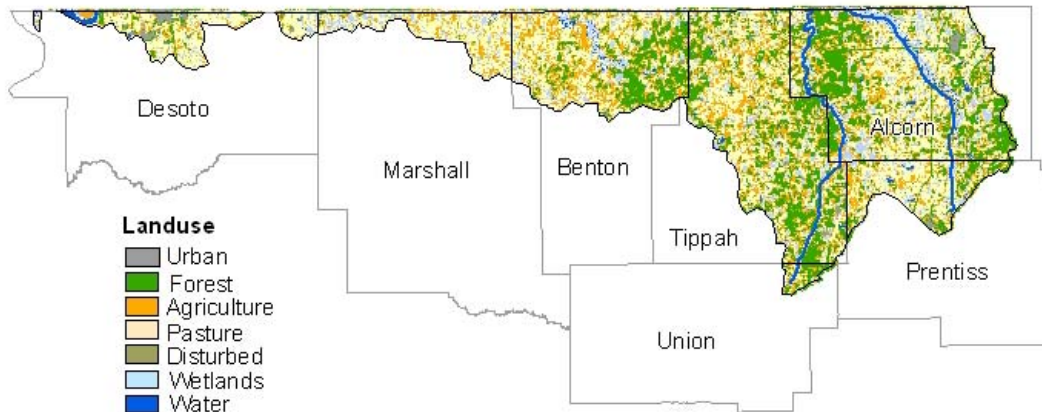


Figure 23: Major Land Cover in the North Independent Streams Basin (MARIS)

Urban areas make up only 2% of the land cover of the basin (Figure 24). Overall, land cover is dominated by *Agricultural* (49%) and includes croplands and pastures. The next largest portion is natural *Forest* (33%), which includes evergreen, deciduous and mixed-forested areas. *Disturbed* areas (strip mines, gravel pits, sandy areas, barren, and transitional areas) make up 13% of the land use in the basin. *Water* sources, which include streams, lakes, reservoir and estuaries, and *Wetland*, which includes forested and nonforested wetlands comprise the remaining 3% of the basin.

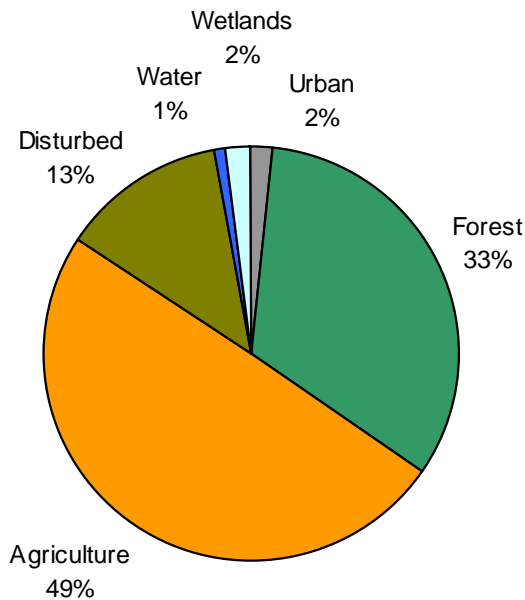


Figure 24: Distribution of Land Cover in the North Independent Streams Basin (MARIS)

Water Resources

The North Independent Streams Basin has a total of 1,956 miles of perennial and intermittent rivers and streams. The majority of these water bodies are classified as Fish and Wildlife streams. Several small ditches and a portion of Tubby Creek, all located below point source discharges, are classified as Ephemeral in the state's WQS. Streams in the basin vary greatly and have sandy, muddy, or clay bottoms with either fast or sluggish flow.

Few major public reservoirs and lakes are found in the North Independent Streams Basin. The largest is Horn Lake located near Memphis, Tennessee which is classified for recreational use. Another notable lake in the basin is Tippah County Lake found in Tippah County State Park located near Ripley. The North Independent Streams Basin has two federally endangered species. This basin also includes one water body, Hatchie River, proposed for review as a potential Mississippi Natural and Scenic Waterways System water body.

Surface Water Assessment

Designated Use Support

The assessments for the North Independent Streams Basin were made based on data from 22 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project (M-BISQ) and the §303(d) fecal coliform monitoring project (Figure 25). The perennial streams where the monitoring stations were located represent the mainstem drainage for each 11-digit watershed in the basin. Use support status for the basin is presented and summarized with causes and sources of impairment.

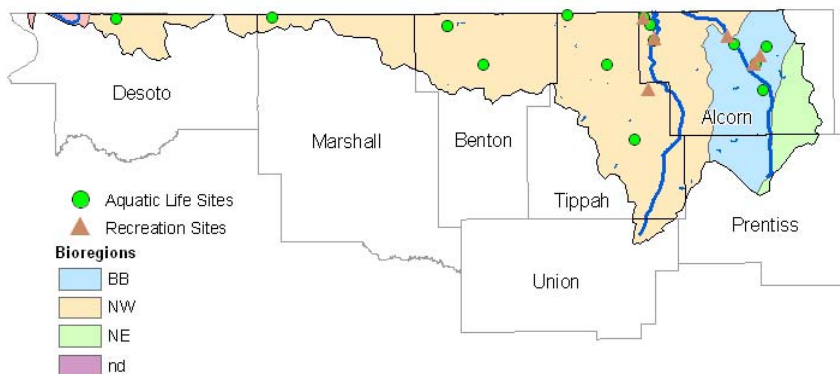


Figure 25: North Independent Streams Basin Monitoring Stations and M-BISQ Bioregions

MDEQ assessed approximately 25% (155 miles) of the total 618 perennial miles of streams and rivers in the North Independent Streams Basin. The status of water quality on the remaining 75% (463 miles) of the basin's perennial rivers and streams is unknown. A summary of use support for the basin's assessed rivers and streams is found in Table 11 and Figure 26. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

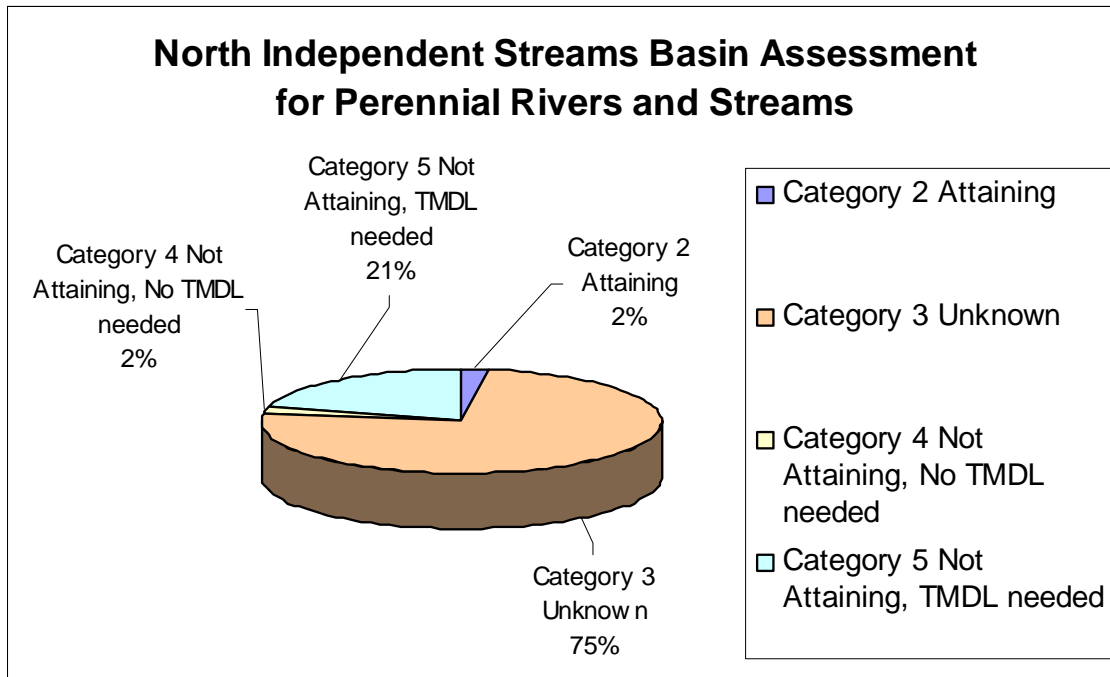
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the North Independent Streams Basin, approximately 2% are in category 2 for attaining some uses but unknown for remaining water body uses, and 2% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 21% of the assessed water bodies. The status of the remaining 75% of water bodies in the North Independent Streams Basin is unknown and these waters are reflected in category 3. Of the 127 miles of waters in category 5, 73% (93 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the North Independent Streams Basin section of the 2004 §303(d) list. Please refer to Table 15 at the end of the North Independent Streams Basin section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 11: Summary of North Independent Streams Basin Use Support Assessments- Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	14
Category 3: Unknown/Insufficient Data for Assessment	1,801
Intermittent Miles	1,338
Perennial Miles	463
Category 4: Not Attaining – No TMDL Needed	14
A. TMDL Completed	14
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	127
A. Pollutant Identified	34
B. Biological Impairment- Cause Unknown	93
Total Miles	1,956

**Figure 26: North Independent Streams Basin Assessment of Perennial Rivers and Streams**

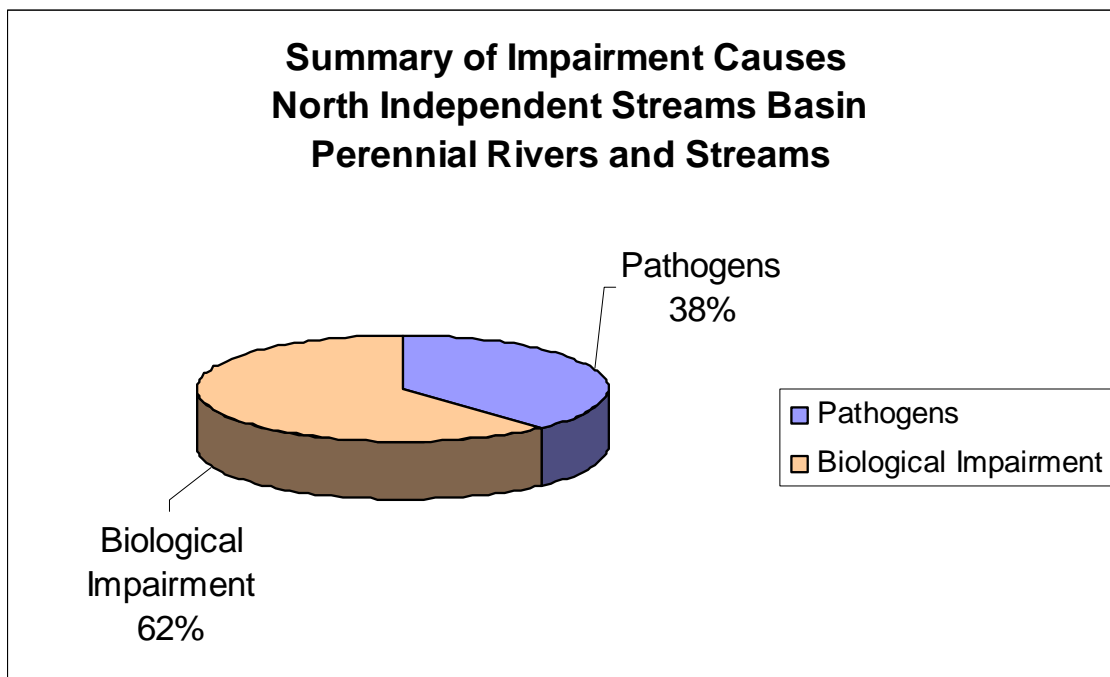
Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were determined for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 12 and Figure 27. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. For these impaired waters, the next step in the state's water quality management process will be to conduct stressor identification studies to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. Other causes of impairment noted in the basin are from pathogens. The source of impairments for waters assessed in the North Independent Streams Basin is unknown. As above, the majority of impairment was determined to be biological and therefore sources of the impairment are yet to be determined.

Table 12: Summary of Impairment Causes-North Independent Streams Basin

Cause Categories	Total Miles
Biological Impairment*	125
Pathogens	78
Total	202

*Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

**Figure 27: Summary of Impairment Causes for Perennial Rivers and Streams-North Independent Streams Basin**

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the North Independent Streams Basin's assessed stream and river miles, approximately 30 miles of perennial rivers and streams are attaining their aquatic life use, while 125 miles were assessed as not attaining and are considered impaired (Table 13 and Figure 28). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figure 29 depicts a geo-referenced coverage of the Aquatic Life Use Support assessments for the North Independent Streams Basin.

Table 13: Aquatic Life Use Support-North Independent Streams Basin

Status	Miles
Attaining	30
Unknown	463
Total Not Attaining	125
TMDL not needed	0
TMDL needed	125
Total	618

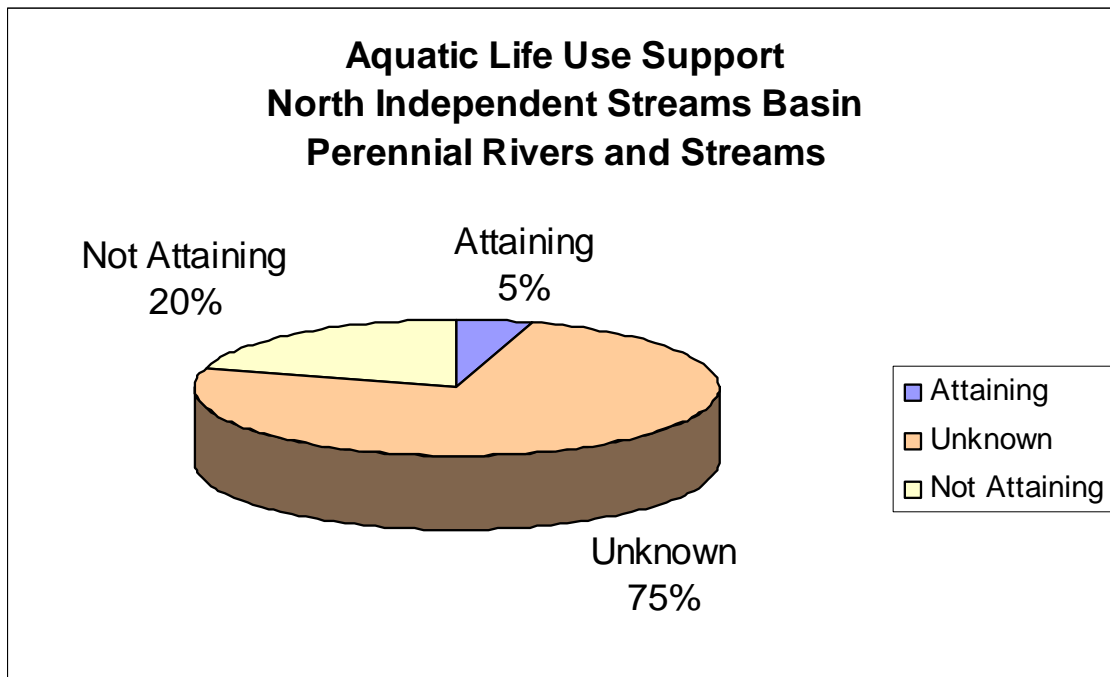


Figure 28: Aquatic Life Use Support-North Independent Streams Basin

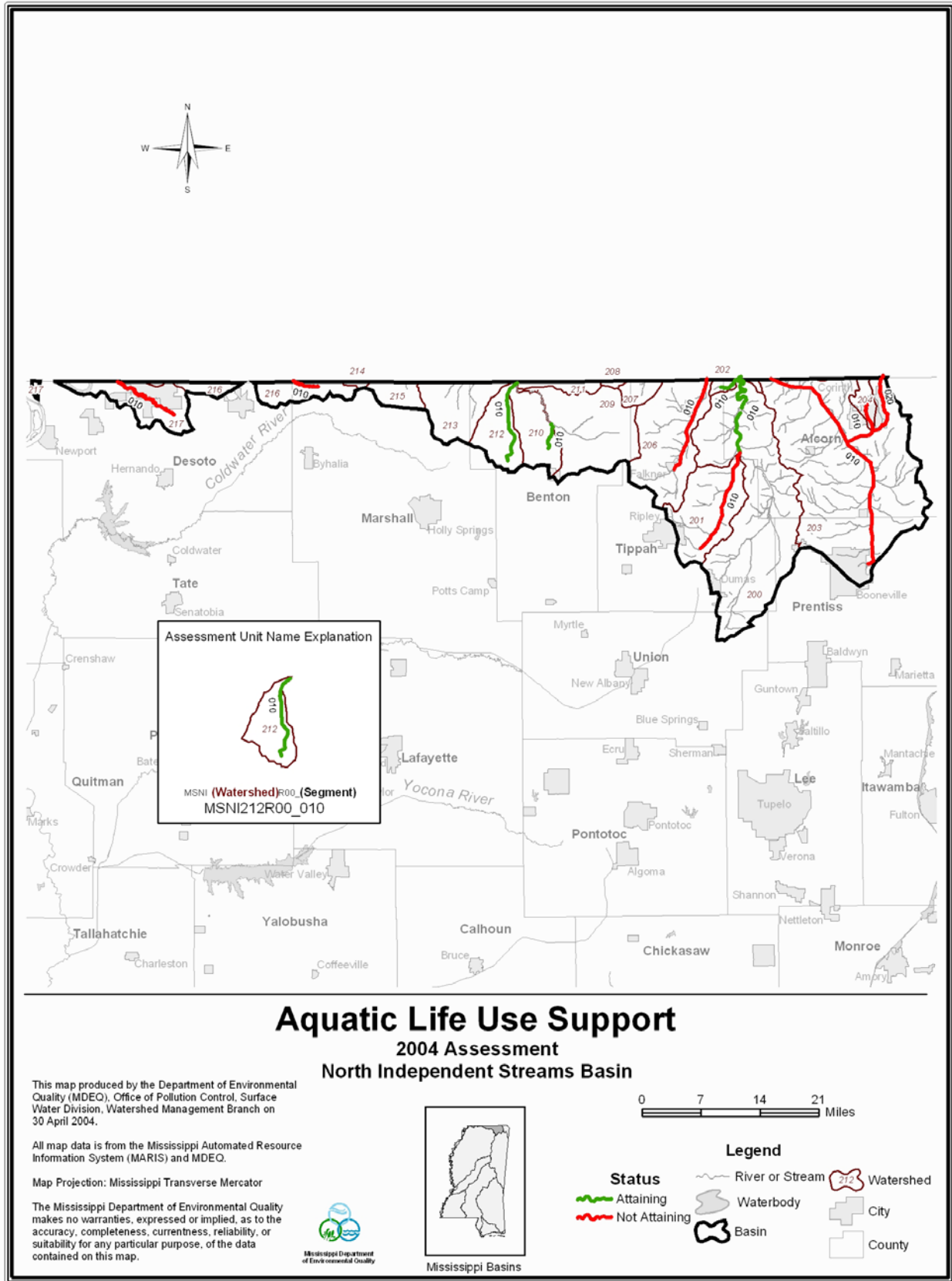


Figure 29: Aquatic Life Use Support Map-North Independent Streams Basin

Recreation Use Support

Data collected as part a statewide §303(d) fecal coliform project were used to make the Recreation Use Support assessments. Of the North Independent Streams Basin's assessed stream and river miles, approximately 26 miles of perennial rivers and streams are attaining their recreation use, while 77 miles were assessed as not attaining and are considered impaired (Table 14 and Figure 30). Figure 31 depicts a geo-referenced coverage of the Recreation Use Support assessments for the North Independent Streams Basin.

Table 14: Recreation Use Support-North Independent Streams Basin

Status	Miles
Attaining	26
Unknown	515
Total Not Attaining	77
TMDL not needed	43
TMDL needed	34
Total	618

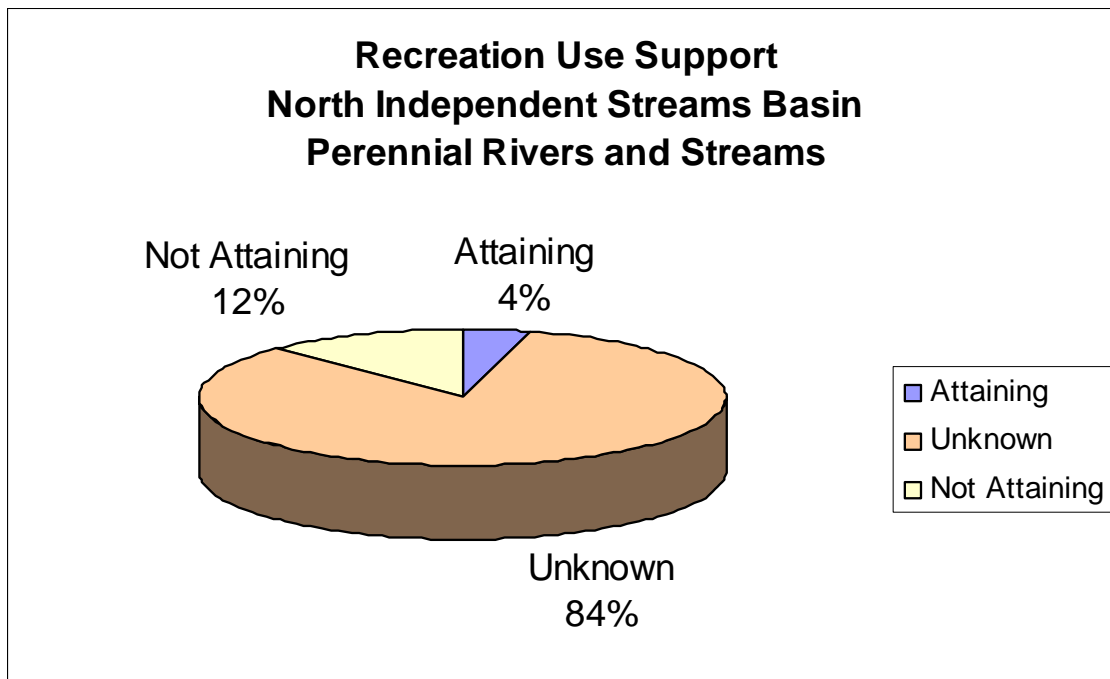


Figure 30: Recreation Use Support-North Independent Streams Basin

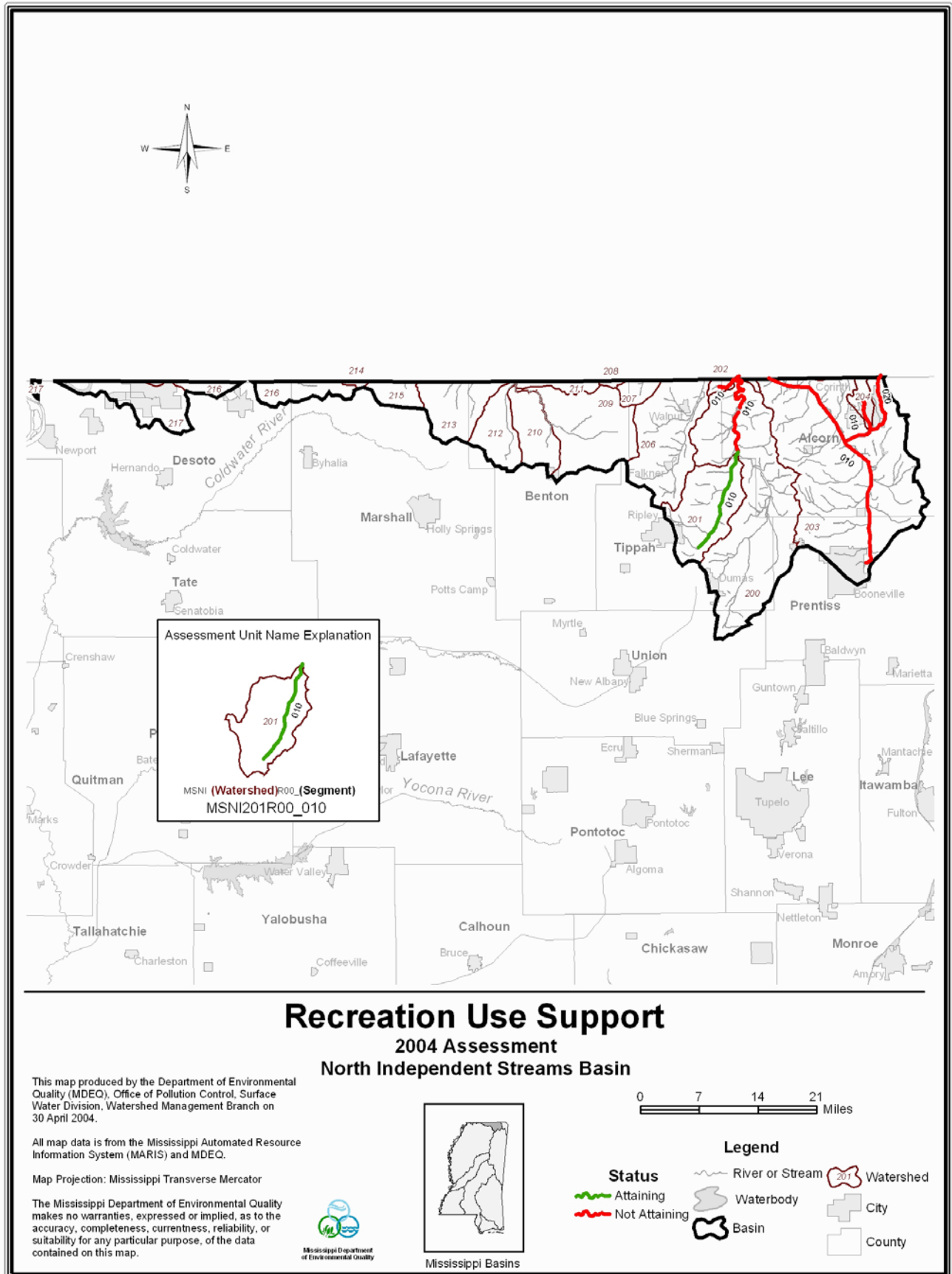


Figure 31: Recreation Use Support Map-North Independent Streams Basin

Table 15: 2004 §305(b) Assessed Water Bodies-North Independent Streams Basin

NORTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BEARMAN CREEK	MSNI202R00_010	MS202E	Alcorn, Tippah	Aquatic Life Support	Attaining
LOCATION: NEAR LONE PINE FROM HEADWATERS TO CONFLUENCE WITH TUSCUMBIA RIVER CANAL				Secondary Contact	Not Attaining
BRIDGE CREEK	MSNI203R00_020	MS203BE	Alcorn	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT CORINTH FROM HEADWATERS TO CONFLUENCE WITH TUSCUMBIA RIVER CANAL				Secondary Contact	Not Attaining
ELAM CREEK	MSNI204R00_010	MS204E	Alcorn	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CORINTH FROM HEADWATERS TO CONFLUENCE WITH BRIDGE CREEK				Secondary Contact	Not Attaining
GRAY'S CREEK	MSNI212R00_010	N/A	Benton	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT WOLF RIVER AT TN STATE LINE					
HORN LAKE CREEK	MSNI217R00_010	MS217HE	Desoto	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT HERNANDO FROM HEADWATERS TO TN STATE LINE					
LITTLE HATCHIE RIVER	MSNI201R00_010	MS201E	Alcorn, Tippah	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CRUMTOWN FROM HEADWATERS TO MOUTH AT HATCHIE RIVER				Secondary Contact	Attaining
MUDDY CREEK	MSNI206R00_010	MS206E	Tippah	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BROWNFIELD FROM HEADWATERS TO TN STATE LINE					
NONCONNAH CREEK	MSNI216R00_010	MS216NE	Marshall	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HANDY CORNER FROM HEADWATERS TO TN STATE LINE					

NORTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
ROBERSON CREEK	MSNI210R00_010	N/A	Benton	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT WOLF RIVER					
TUSCUMBIA RIVER CANAL	MSNI203R00_010	MS203TE	Alcorn, Prentiss	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CUBA FROM HEADWATERS TO TN STATE LINE				Secondary Contact	Not Attaining, TMDL Completed
UPPER HATCHIE RIVER	MSNI200R00_010	MS200E	Alcorn	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH LITTLE HATCHIE RIVER TO TN STATE LINE				Secondary Contact	Not Attaining, TMDL Completed

PASCAGOULA RIVER BASIN

Basin Description

The Pascagoula River Basin is the second largest basin in Mississippi at approximately

164 miles long and 84 miles wide and comprises most of southeastern Mississippi with a small part extending into southwestern Alabama. The two main headwater streams in the basin are the Leaf and the Chickasawhay Rivers which eventually confluence to form the Pascagoula River. The Pascagoula River system, comprised of all or part of 22 counties, drains an area of about 9,600 square miles and eventually empties into the Gulf of Mexico. The Pascagoula River System is the last unimpeded major river system in the lower 48 states.



Figure 32: Pascagoula River Basin (MDEQ)

Near the Gulf Coast, the topography is low-lying flatlands, forested wetlands, and marshlands. Farther inland, the basin consists primarily of gently rolling hills and broad, flat floodplains. There are also several urban areas in the basin near population centers such as Meridian, Laurel, Hattiesburg, and Pascagoula.

The Pascagoula River Basin, with an estimated population of 716,925, encompasses roughly one-quarter of Mississippi's population. The Basin is predominantly rural with an average population density of around 75 people per square mile. Greater population densities are found near the urban areas.

Land Use

The Pascagoula River Basin is heavily forested throughout the entire river basin. The central portion of the basin is known as the Pine Belt because the basin's forests consist mostly of pine trees with scattered areas of hardwoods. These vast timber resources are the predominant land use but many diverse land uses have staked their claim on this resource rich area of our state. Among these are oil and gas production, agriculture, recreation, and urban development. Major land cover in the basin is shown in Figure 33.

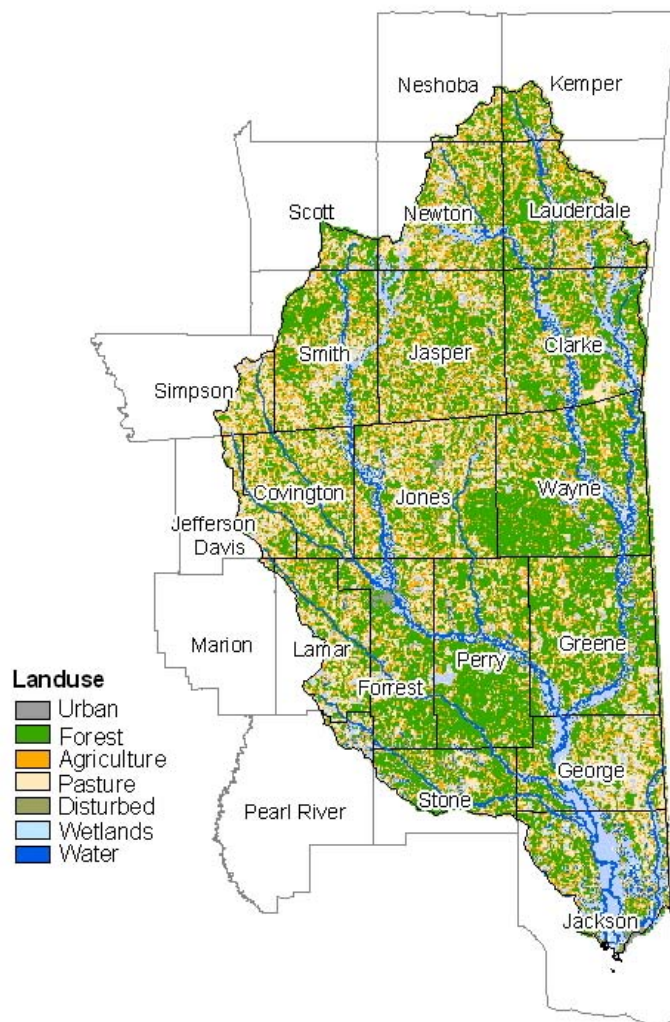
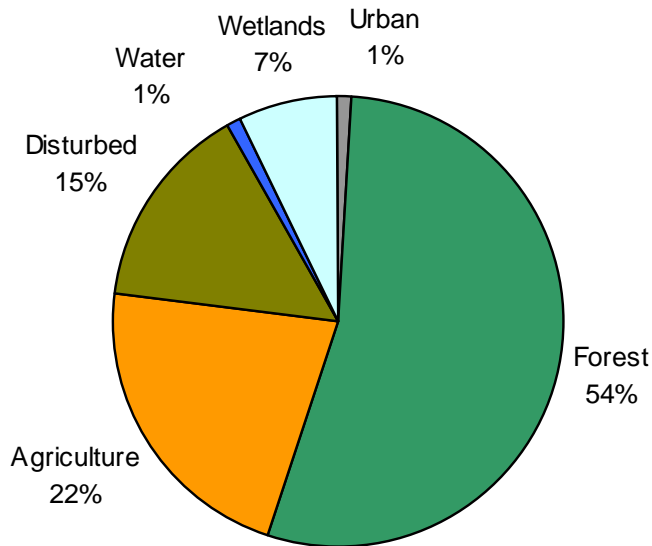


Figure 33: Major Land Cover in the Pascagoula River Basin (MARIS)

Forests dominate the land cover, with 54% of the basin covered by forest (Figure 34). These forests consist of 64% Non-Industrial privately- owned lands, 22% Forest Industry-owned lands, and 14% Government-owned land. In 1999, approximately 26 percent of Mississippi's timber production came from the basin contributing about \$324 million to the Mississippi economy. *Agriculture* accounts for about 22 percent of the land use, with two percent of the basin used for cropland and 20 percent for pasture.



Urban uses (i.e., towns and cities) make up only 1% of the basin area. However, one of the largest concentrations of industry in the state is in the coastal portion of the basin near the cities of Pascagoula, Moss Point, Escatawpa, and Gautier. *Disturbed areas* (strip mines, gravel pits, sandy areas, barren, and transitional areas) make up 15% of the land use in the basin. *Water* sources, which include streams, lakes, reservoirs and estuaries, and *Wetland*, which includes forested and non-forested wetlands and coastal marsh comprise 8% of the basin.

Figure 34: Distribution of Land Cover in the Pascagoula River Basin (MARIS)

Water Resources

The Pascagoula River Basin has a total of 14,777 miles of perennial and intermittent rivers and streams. According to the state's WQS, the majority of these water bodies are classified as Fish and Wildlife streams. There are also a significant number of streams that are classified for Recreation and four water bodies that are classified as Public Water Supply. Stream conditions as a whole are usually natural, or unmodified, in appearance with clear water. Some streams in this area of the state are considered as "blackwater streams" because they are stained by tannic acid leached from vegetation. The majority of the streams are deep to moderately deep, fast flowing perennial streams. Near the coast, the lower Pascagoula River system becomes estuarine as the waters enter the Mississippi Sound near the cities of Pascagoula and Gautier.

Numerous reservoirs and lakes can be found in the Pascagoula River Basin. These lakes are significant natural and recreational resources. The Pat Harrison Waterway District manages eight flood control reservoirs that double as water parks and two are also designated as water supply reservoirs. The Mississippi Department of Wildlife,

Fisheries, and Parks manages nine state fishing lakes as well as two state park lakes within the Basin.

An important aspect of the Pascagoula River Basin is the role it plays in maintaining the health and diversity of the Mississippi Sound. The Pascagoula River Basin supplies a large portion of the fresh water entering the Mississippi Sound. In so doing, it replenishes nutrients and sediments that play a critical role in maintaining the productivity of the coastal waters. The sediment it carries maintains an extensive salt marsh habitat that in turn regulates the discharge of nutrients to coastal waters. Because the marshes are important for sustaining the coastal ecosystem, changes in marsh area, plant species, and bio-geological habitats adversely affect the water bodies that they help buffer.

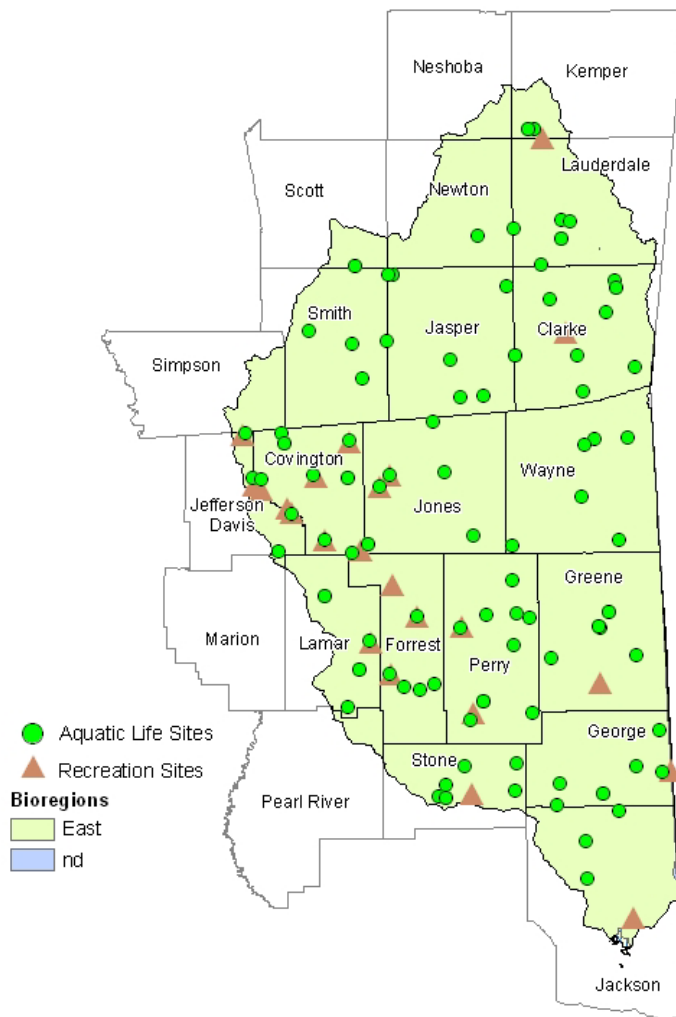
Evolution of coastal wetland habitats through historical and pre-historical times has largely shaped the Mississippi coastal environment into what we see today. In addition to the prolific productivity and filtering capabilities, the physiography that they create is also beneficial. Protective bays and shallows are important habitats for seagrass, oysters, fish and shellfish. These landforms have evolved through time based primarily on the sediments carried by the rivers. Coastal erosion, river meandering or capture, and changes in river transport have markedly affected the geometry and geography of Mississippi's marsh habitats. The total coastal marsh (below the 15ft contour) within Mississippi's Pascagoula River Basin is approximately 21,000 acres, making up roughly 35 percent of the total marsh habitat in Coastal Mississippi.

In terms of biological resources, the Gulf Sturgeon and the Swallow-tailed Kite can be found here as well as many more species. The Pascagoula River Basin has 11 federally threatened and 6 federally endangered species as well as approximately 13 non-native species. In addition, this basin has the state's only designated National Wild and Scenic Stream, Black Creek. The basin also includes numerous water bodies proposed for review as Mississippi Natural and Scenic Waterways System water bodies: Beaverdam Creek, Red Creek, Okatoma Creek, Pascagoula River, Escatawpa River, Chickasawhay River, Okatibbee Creek, Chunky River, Chunky Creek, Tallahala Creek, Leaf River, Bowie River, and Bluff Creek. Because of the abundant wildlife populations, this basin provides great bird watching, hunting and fishing recreational activities as well as a tremendous seafood industry along the coast.

Surface Water Assessment

Designated Use Support

The assessments for the Pascagoula River Basin were made based on data from 130 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project and the §303(d) fecal coliform monitoring project (Figure 35). The perennial streams where the monitoring stations were located



represented the mainstem drainage for each 11-digit watershed in the basin. Additional monitoring data collected in support of fish advisory listings were also utilized in the assessment. Use support status for the basin is presented and summarized with causes and sources of impairment. There are currently three fish advisories on the waters in the Pascagoula River Basin, all for mercury. For more information on these advisories, see Part III Public Health Concerns and Advisories in the 2004 §305(b) report.

Figure 35: Pascagoula River Basin Monitoring Stations

MDEQ assessed approximately 25% (1,560 miles) of the total 6,217 perennial miles of streams and rivers in the Pascagoula River Basin. The status of water quality on the remaining 75% (4,657 miles) of the basin's perennial rivers and streams is unknown. The majority of stream miles (58%) in the Pascagoula River Basin is composed of intermittent streams and therefore is not readily assessable.

A summary of use support for the basin's assessed rivers and streams is found in Table 16 and Figure 36. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

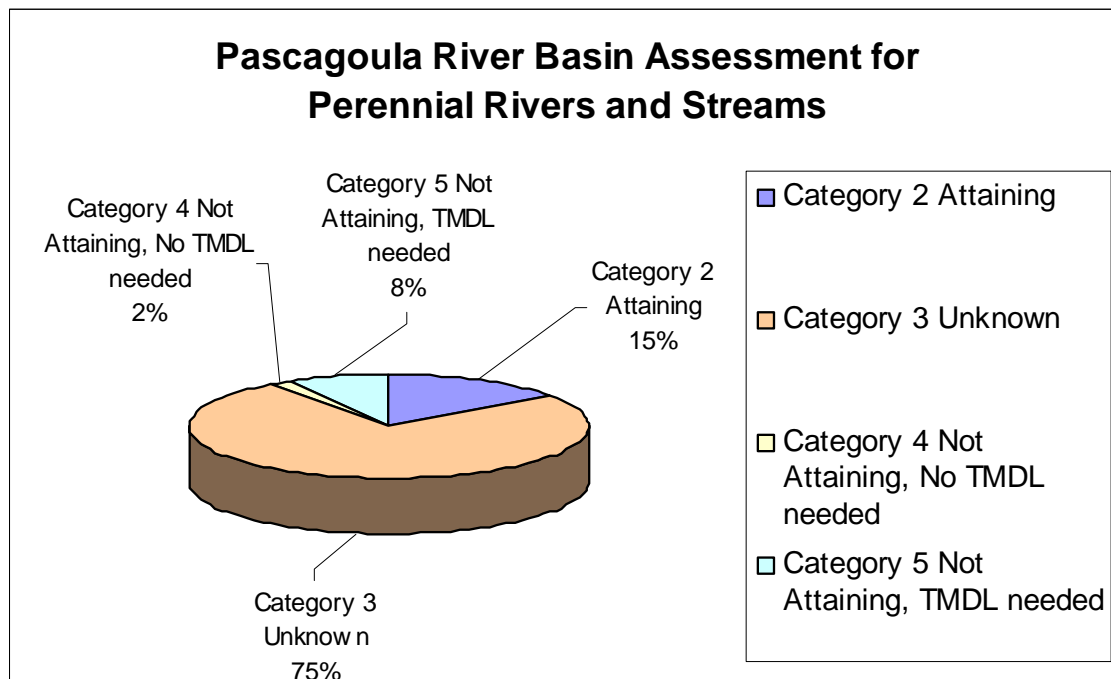
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the Pascagoula River Basin, approximately 15% are in category 2 for attaining some uses but unknown for remaining water body uses, and 2% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 8% of the assessed water bodies. The status of the remaining 75% of water bodies in the Pascagoula River Basin is unknown and these waters are reflected in category 3. Of the 495 miles of waters in category 5, 78% (385 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the Pascagoula River Basin section of the 2004 §303(d) list. Please refer to Table 20 at the end of the Pascagoula River Basin section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 16: Summary of Pascagoula River Basin Use Support Assessments-Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	935
Category 3: Unknown/Insufficient Data for Assessment	13,217
Intermittent Miles	8,560
Perennial Miles	4,657
Category 4: Not Attaining – No TMDL Needed	130
A. TMDL Completed	130
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	495
A. Pollutant Identified	110
B. Biological Impairment- Cause Unknown	385
Total Miles	14,777

**Figure 36: Pascagoula River Basin Assessment of Perennial Rivers and Streams**

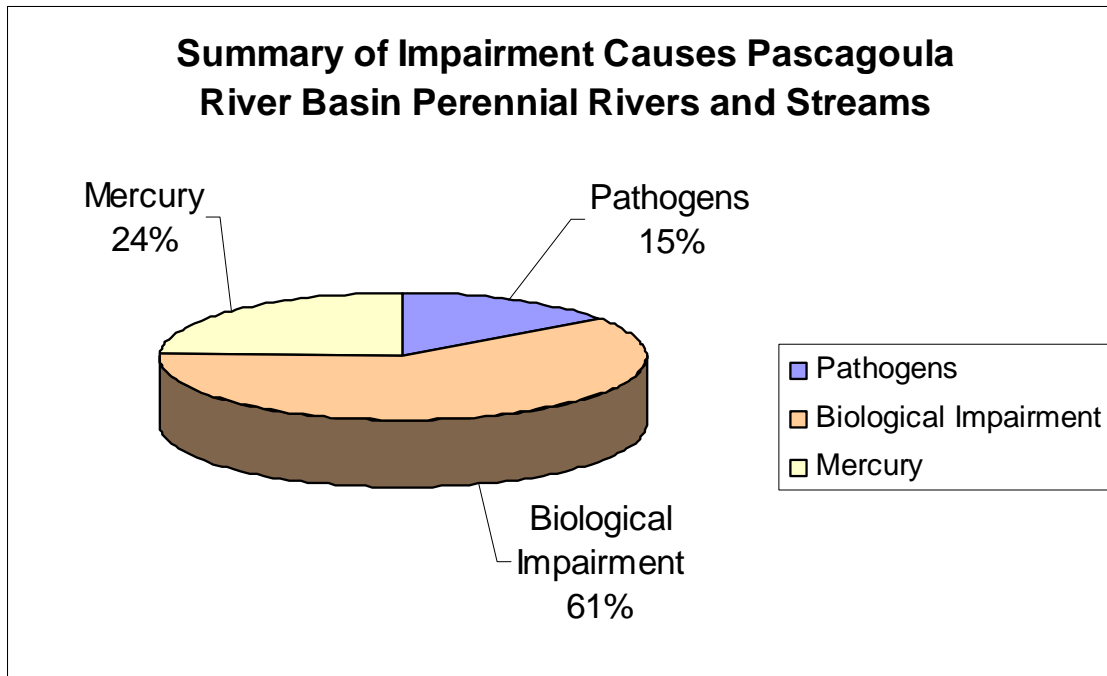
Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were evaluated for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 17 and Figure 37. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. For these impaired waters, the next step in the state's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. Other causes of impairment noted in the basin are from pathogens and mercury. The source of the pathogen and biological impairments in the Pascagoula River Basin is unknown. As stated above, the majority of impairment was determined to be biological and therefore sources of the impairment are yet to be determined. Mercury is believed to result from a combination of natural geologic conditions, old industrial point sources, and atmospheric deposition from coal fired plants and incinerators.

Table 17: Summary of Impairment Causes-Pascagoula River Basin

Cause Categories	Total Miles
Biological Impairment*	385
Pathogens	94
Mercury	154
Total	633

* Note: Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

**Figure 37: Summary of Impairment Causes for Perennial Rivers and Streams-Pascagoula River Basin**

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the Pascagoula River Basin's assessed stream and river miles, approximately 964 miles of perennial rivers and streams are attaining their aquatic life use, while 385 miles were assessed as not attaining and are considered impaired (Table 18 and Figure 38). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figures 39-42 depict geo-referenced coverages of the Aquatic Life Use Support assessments for the Pascagoula River Basin.

Table 18: Aquatic Life Use Support-Pascagoula River Basin

Status	Miles
Attaining	964
Unknown	4,868
Total Not Attaining	385
TMDL not needed	0
TMDL needed	385
Total	6,217

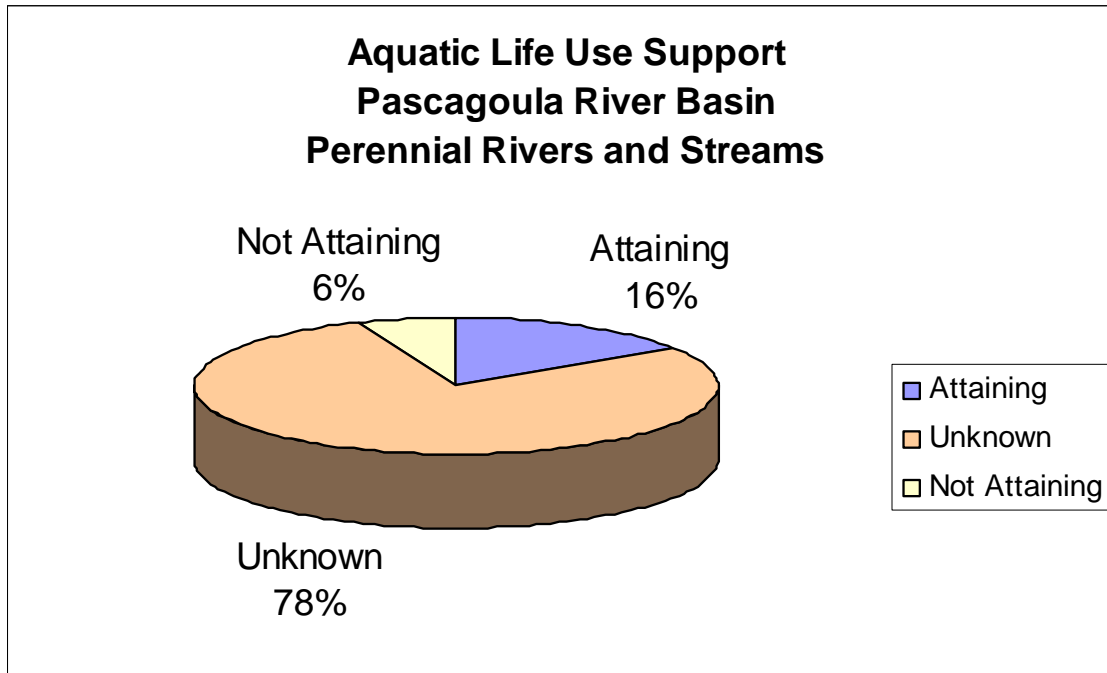


Figure 38: Aquatic Life Use Support-Pascagoula River Basin

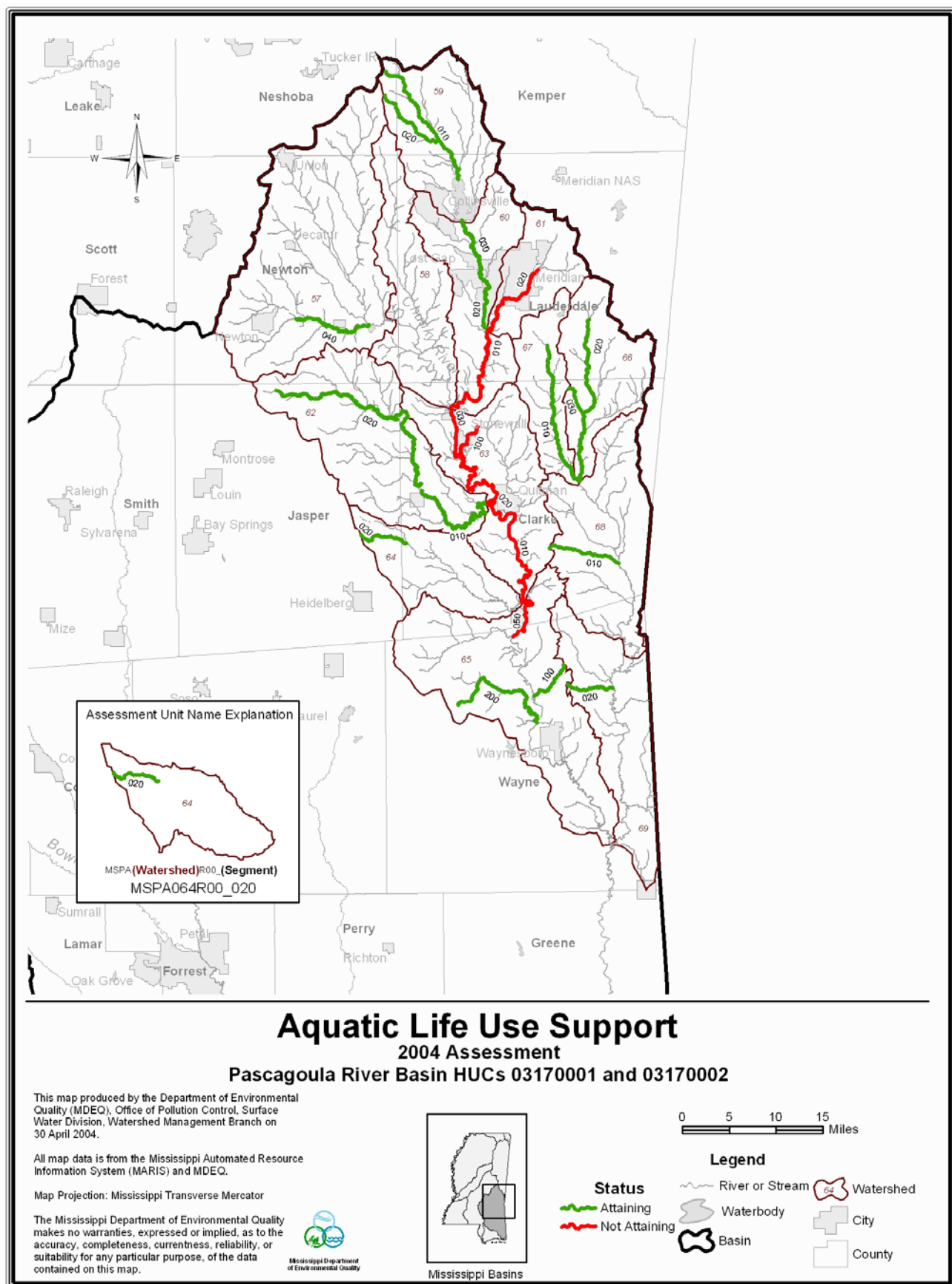


Figure 39: Aquatic Life Use Support Map-Upper Pascagoula River Basin

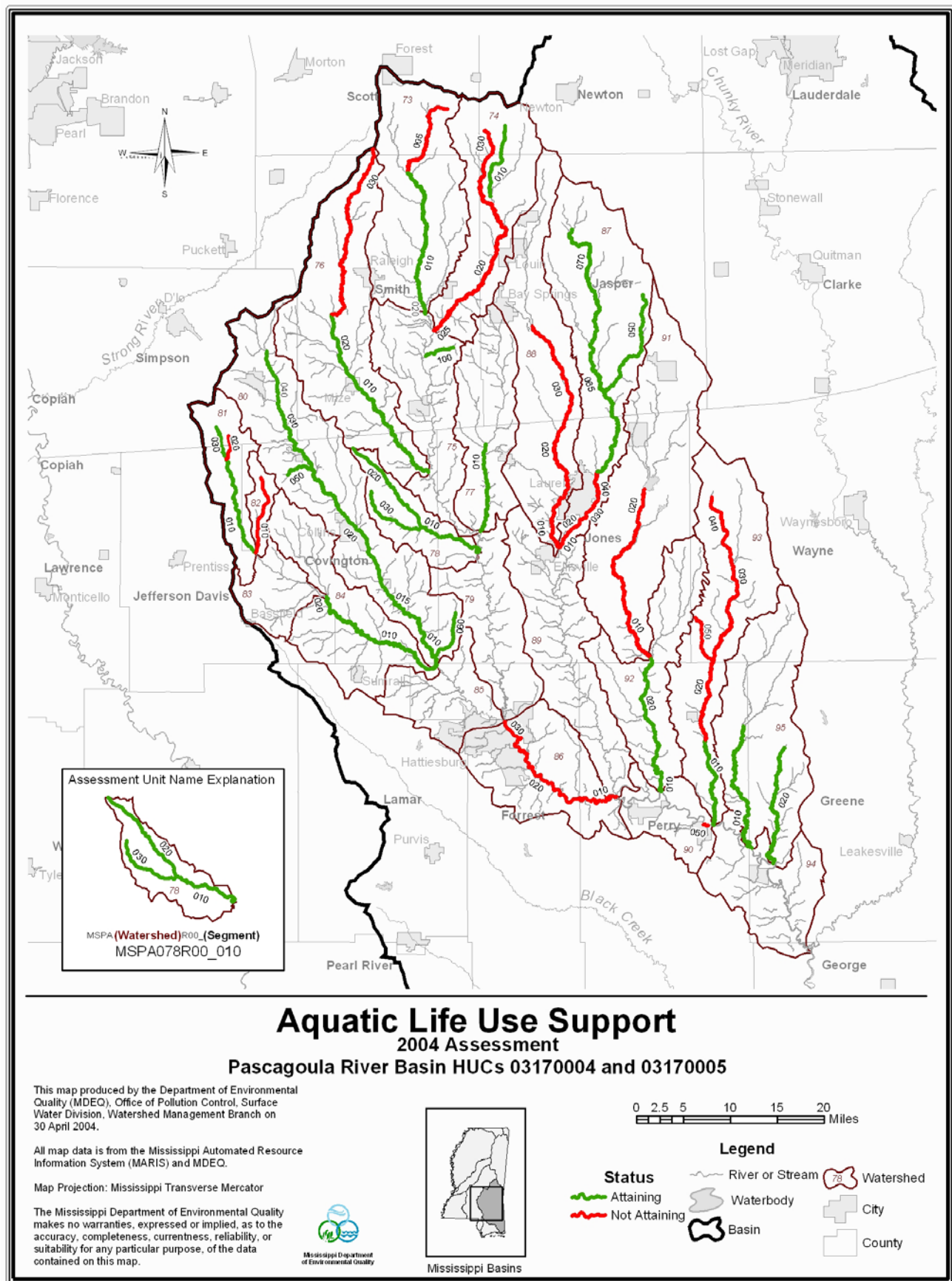


Figure 40: Aquatic Life Use Support Map-Middle Pascagoula River Basin

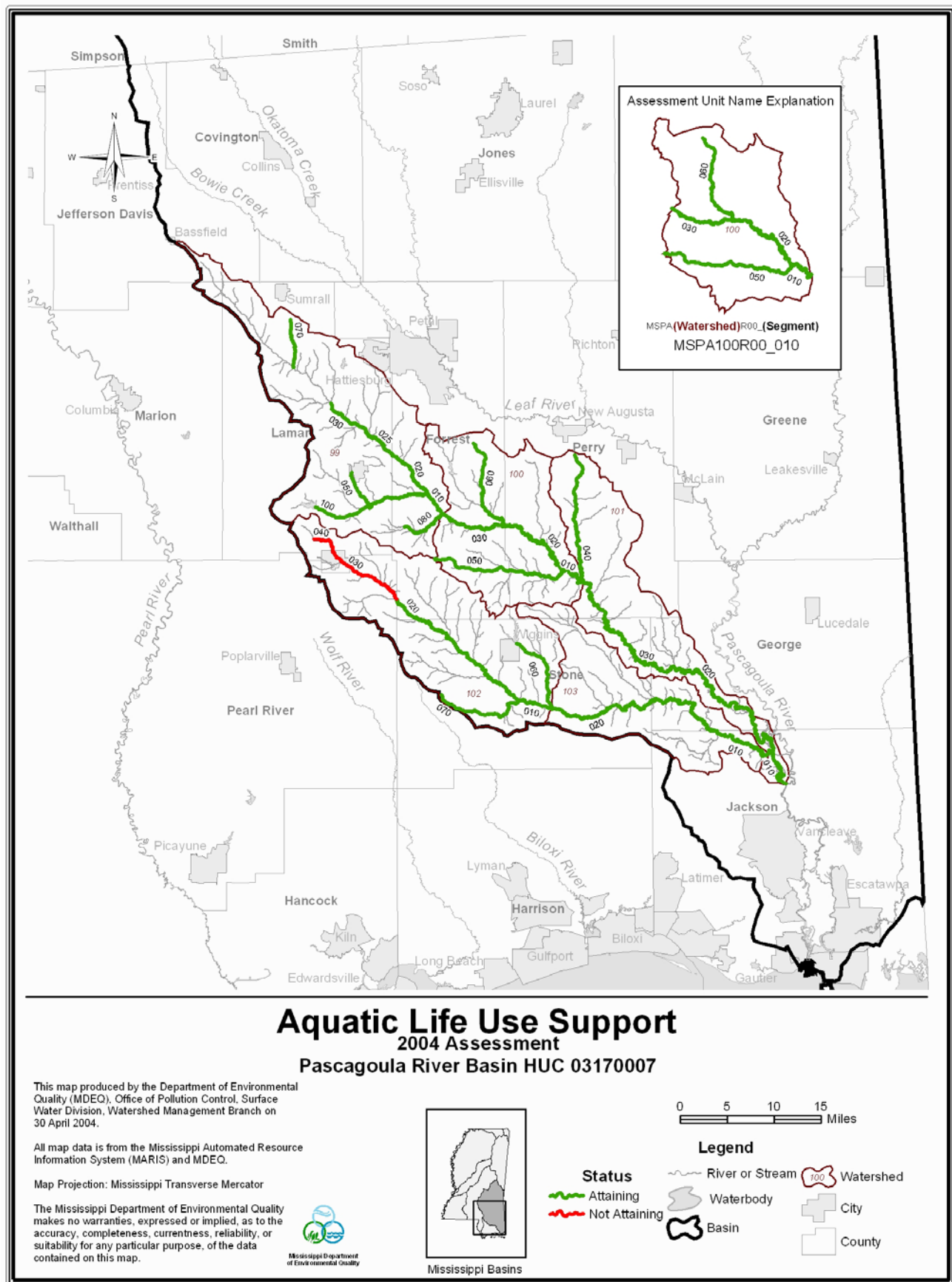


Figure 41: Aquatic Life Use Support Map-Lower Pascagoula River Basin

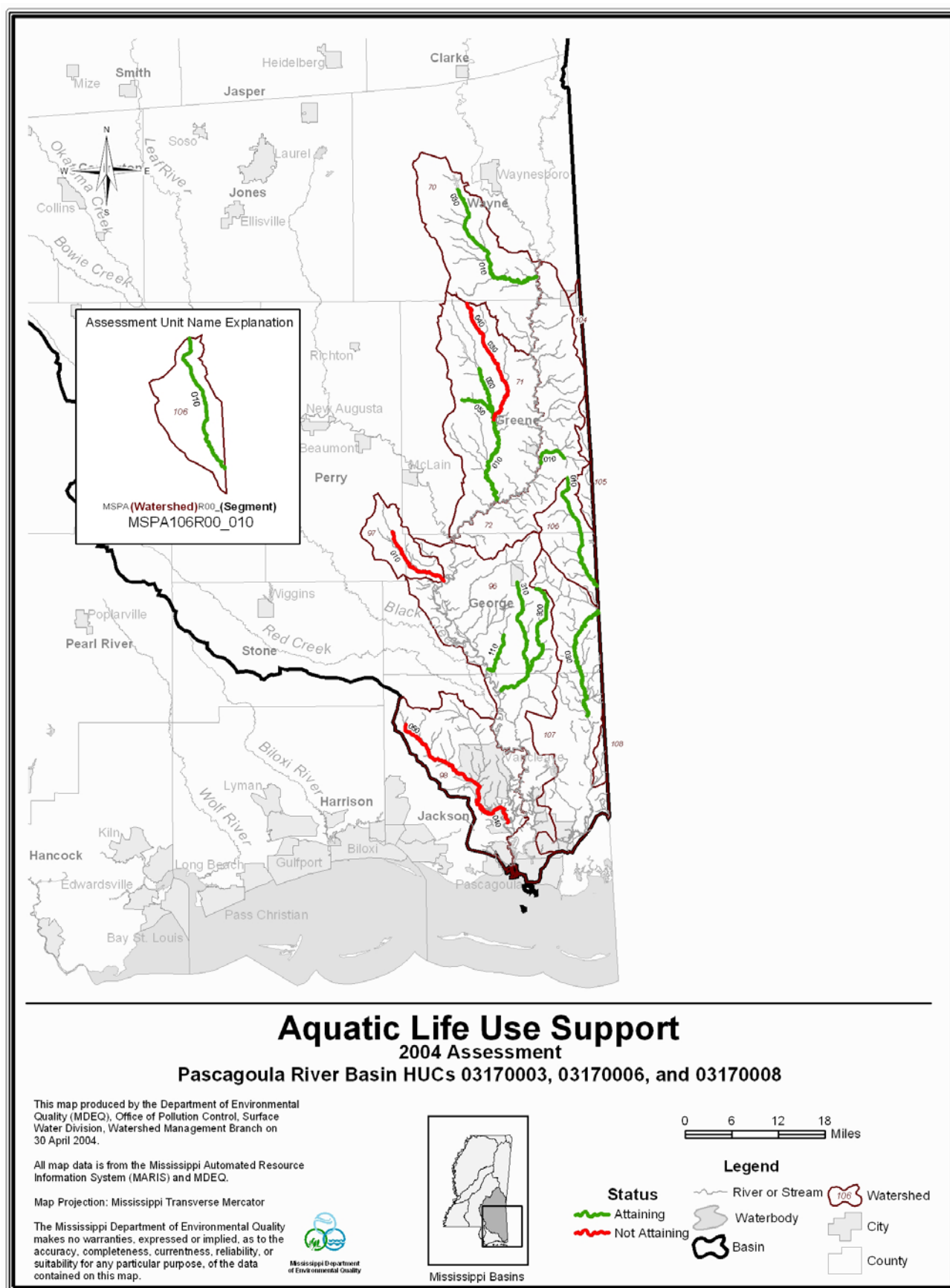


Figure 42: Aquatic Life Use Support Map-Lower Pascagoula River Basin

Recreation Use Support

Data collected as part of a statewide §303(d) fecal coliform project were used to make the Recreation Use Support assessments. Of the Pascagoula River Basin's assessed stream and river miles, approximately 274 miles of perennial rivers and streams are attaining their recreation use, while 95 miles were assessed as not attaining and are considered impaired (Table 19 and Figure 43). Figures 44-47 depict geo-referenced coverages of the Recreation Use Support assessments for the Pascagoula River Basin.

Table 19: Recreation Use Support-Pascagoula River Basin

Status	Miles
Attaining	274
Unknown	5,848
Total Not Attaining	95
TMDL not needed	83
TMDL needed	12
Total	6,217

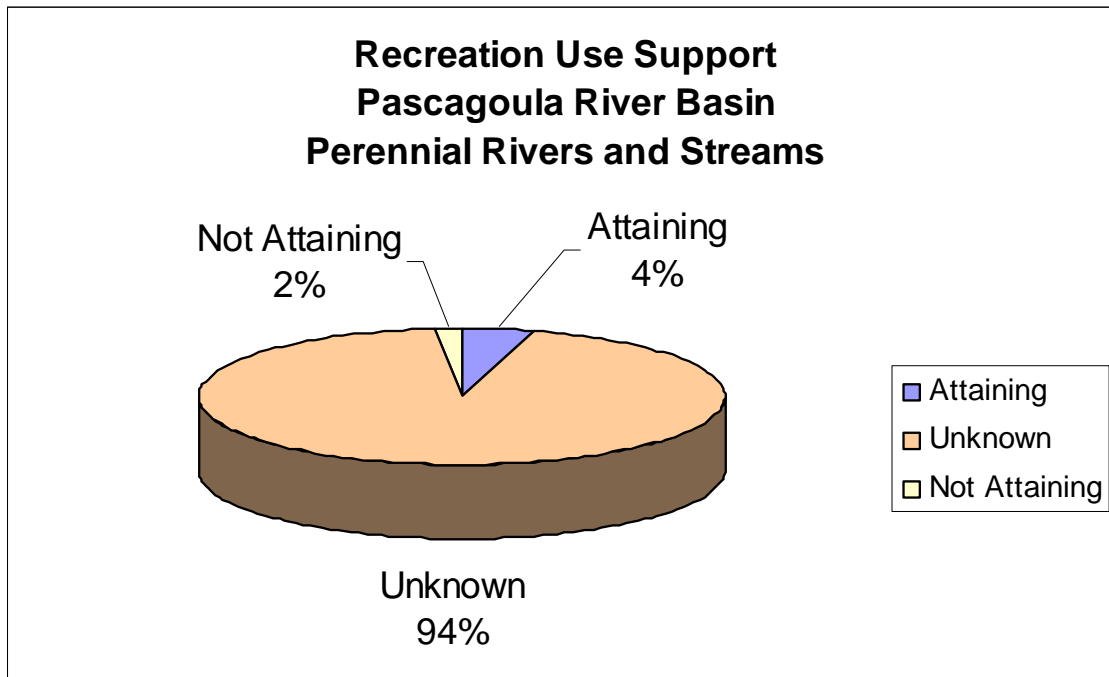


Figure 43: Recreation Use Support- Pascagoula River Basin

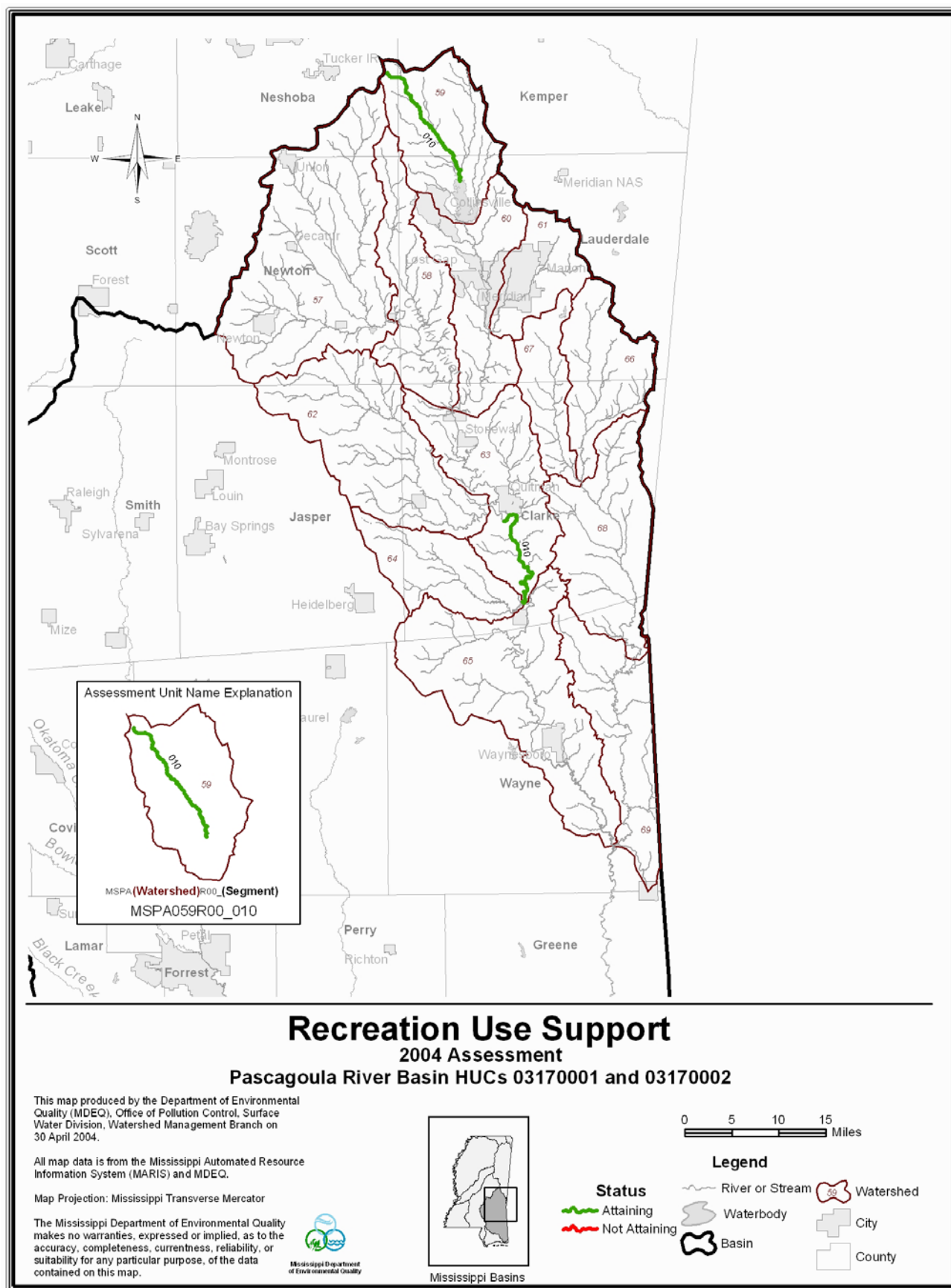


Figure 44: Recreation Use Support Map-Upper Pascagoula River Basin

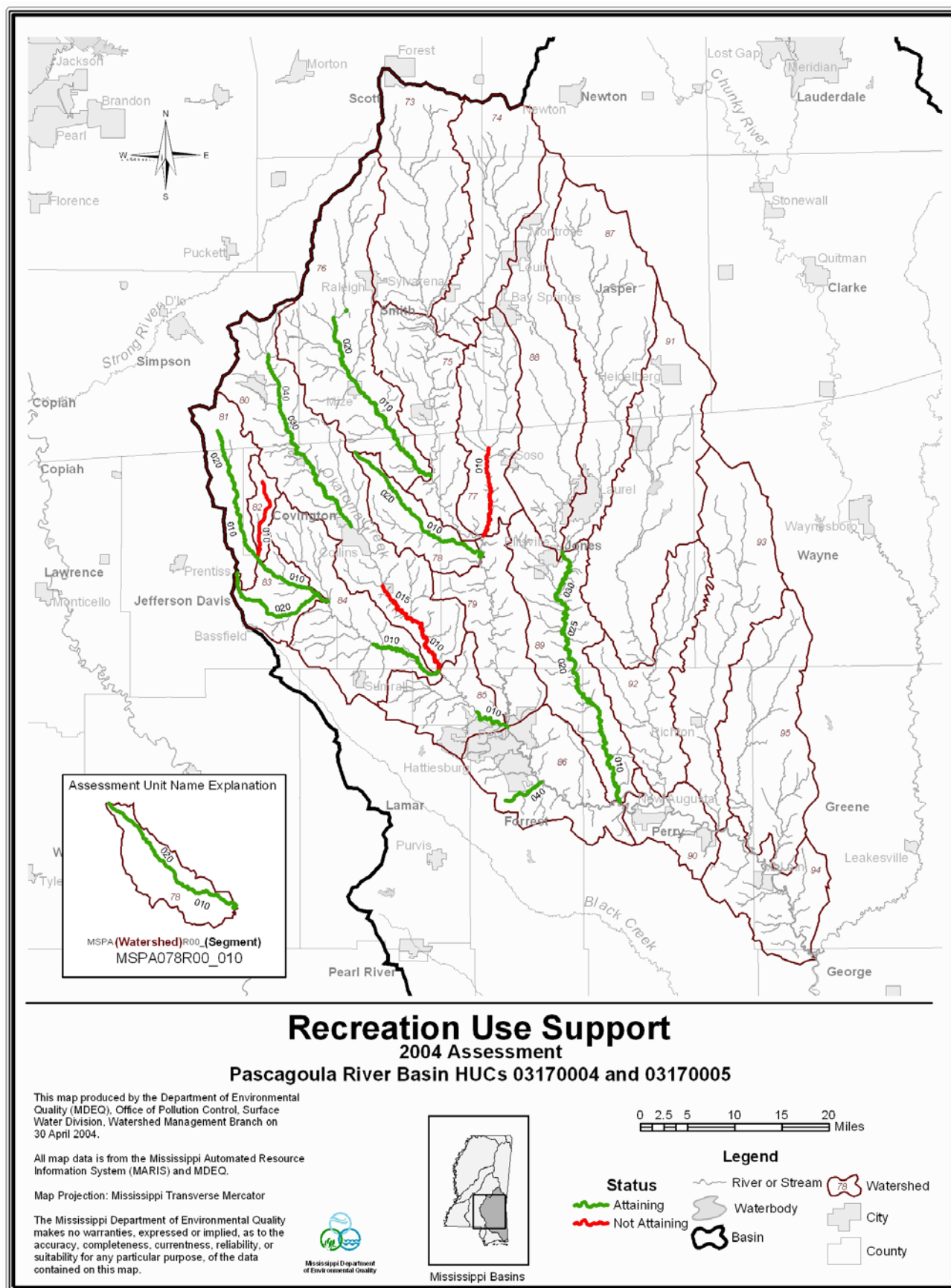


Figure 45: Recreation Use Support Map-Middle Pascagoula River Basin

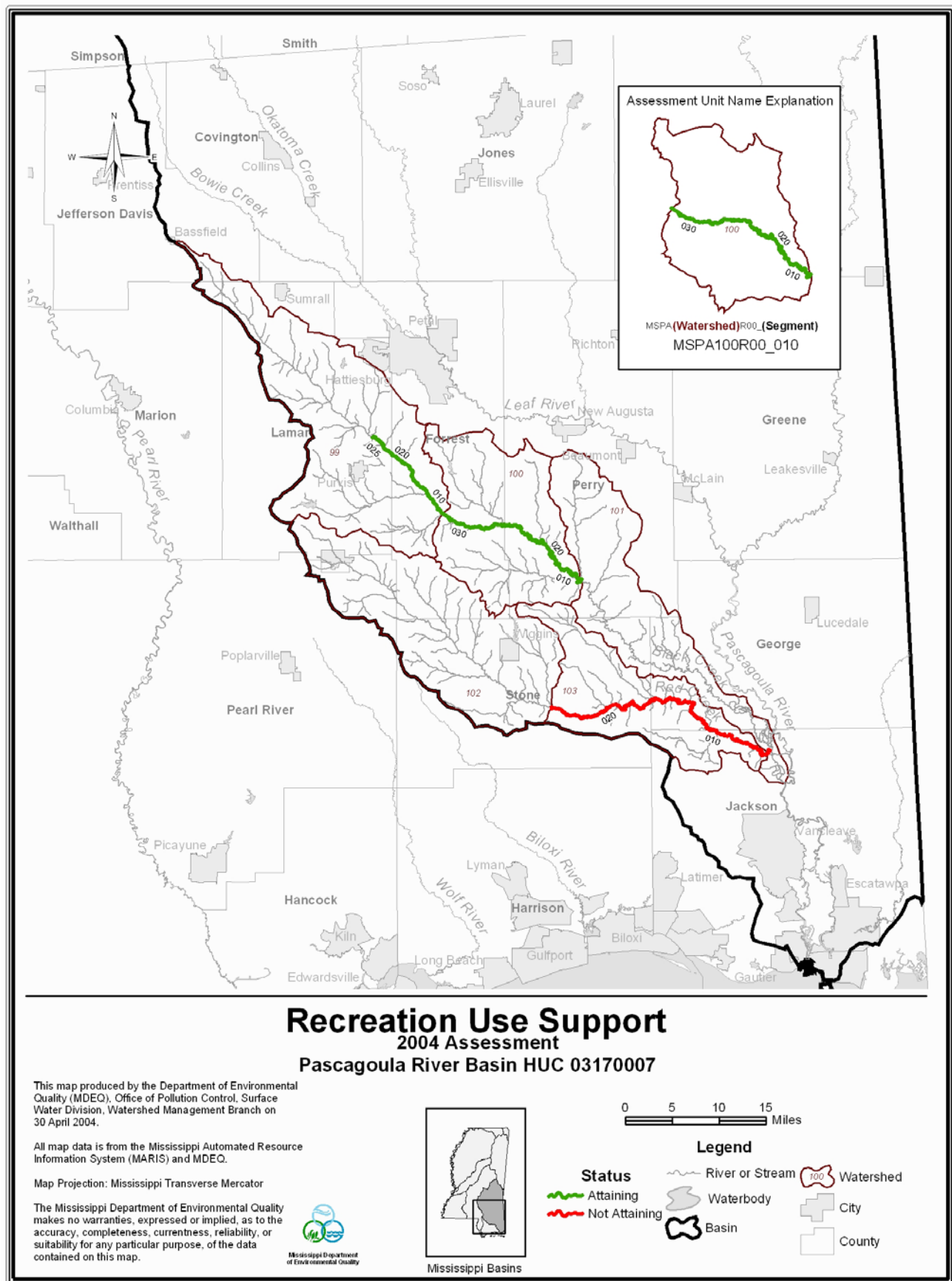


Figure 46: Recreation Use Support Map-Lower Pascagoula River Basin

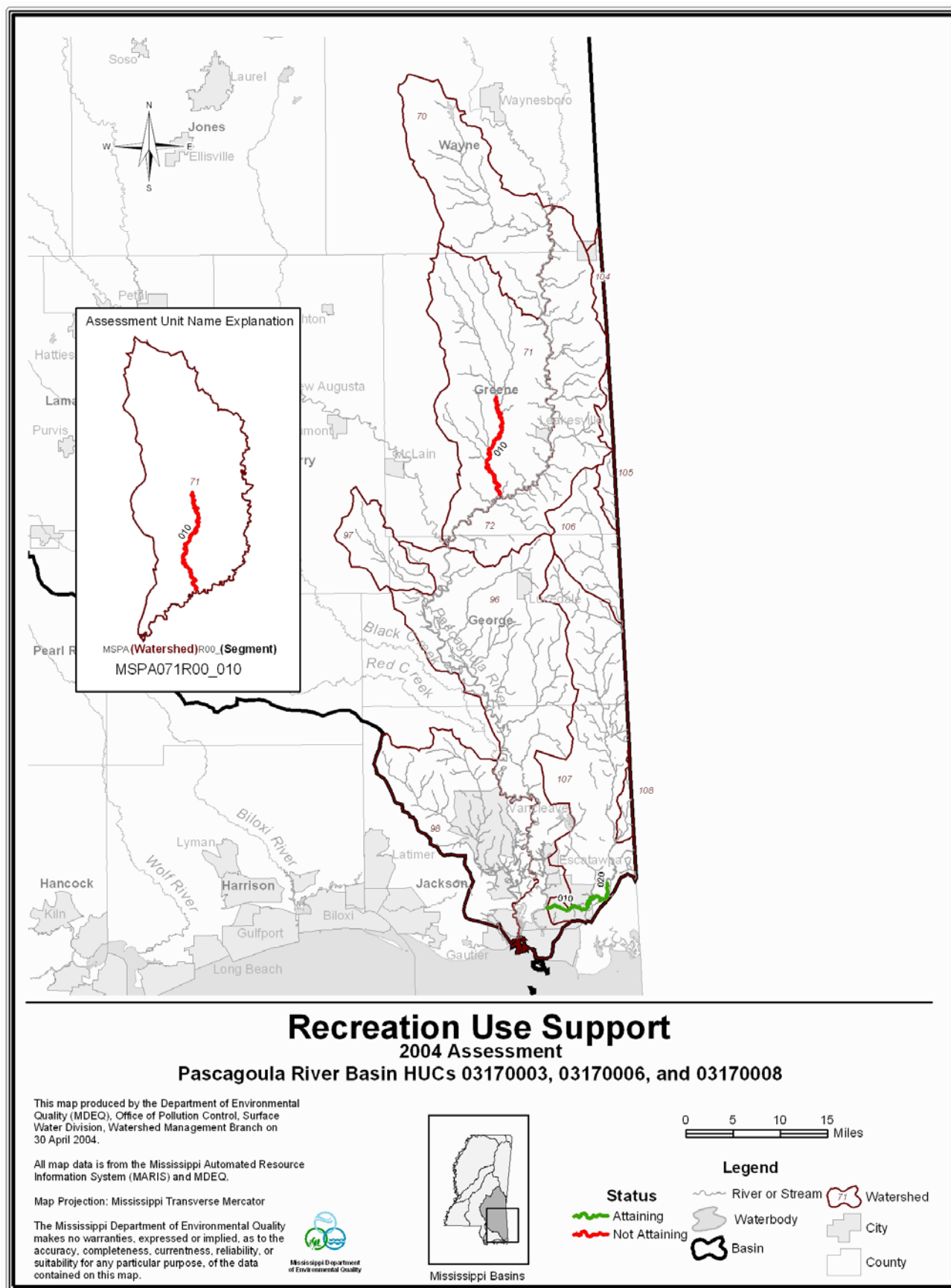


Figure 47: Recreation Use Support Map-Lower Pascagoula River Basin

Fish Consumption Use Support

Data collected and analyzed as part of MDEQ's fish tissue monitoring program and warranting fish tissue advisories were used to make the Fish Consumption Use Support assessments. Currently, there are three water bodies in the Pascagoula River Basin with fish tissue advisories. These waters are Escatawpa River, Pascagoula River, and Archusa Creek Water Park. Therefore, of the Pascagoula River Basin's assessed stream and river miles, approximately 154 miles of perennial rivers and streams are not attaining their fish consumption use and are considered impaired. Of the total impaired miles, mercury TMDLs have been developed for 59 miles. The remaining 98 miles are scheduled for TMDL development. For more information on fish advisories and Fish Consumption Use Support assessment, refer to Part III, Public Health Concerns and Advisories, of the 2004 §305(b) report.

Table 20: 2004 §305(b) Assessed Water Bodies-Pascagoula River Basin

PASCAGOULA RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
ATKINSON CREEK	MSPA095R00_020	N/A	Greene	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT LEAF RIVER					
BEAVERDAM BRANCH	MSPA099R00_050	N/A	Lamar	Aquatic Life Support	Attaining
LOCATION: AT PURVIS FROM HEADWATERS TO CONFLUENCE WITH LITTLE BLACK CREEK					
BEAVERDAM CREEK	MSPA100R00_050	N/A	Forrest, Perry	Aquatic Life Support	Attaining
LOCATION: NEAR MAXIE FROM HEADWATERS TO CONFLUNCE WITH BLACK CREEK					
BIG CEDAR CREEK	MSPA096R00_310	N/A	George, Jackson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PASCAGOULA RIVER					
BIG CREEK	MSPA099R00_080	N/A	Forrest	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BLACK CREEK					
BIG CREEK	MSPA077R00_010	MS077E	Jones	Aquatic Life Support	Attaining
LOCATION: NEAR SOSO FROM CONFLUENCE WITH MILL CREEK TO WATERSHED BOUNDARY (075 & 079)				Secondary Contact	Not Attaining
BIG CREEK	MSPA071R00_010	MS071BE	Greene	Aquatic Life Support	Attaining
LOCATION: NEAR LEAKESVILLE FROM CONFLUENCE OF MASON CREEK TO CONFLUENCE WITH CHICKASAWHAY RIVER				Secondary Contact	Not Attaining, TMDL Completed
BIG CREEK	MSPA071R00_020	N/A	Greene	Aquatic Life Support	Attaining
LOCATION: NEAR LEAKESVILLE FORM CONFLUENCE OF TURKEY FORK AND HELL HOLE CREEKS TO CONFLUENCE WITH MASON CREEK					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BIG CREEK	MSPA070R00_010	N/A	Wayne	Aquatic Life Support	Attaining
LOCATION: AT CLARA FROM CONFLUENCE OF MAYNOR CREEK TO CONFLUENCE WITH CHICKASAWHAY RIVER					
BLACK CREEK	MSPA101R00_010	N/A	Jackson	Aquatic Life Support	Attaining
LOCATION: NEAR VESTRY FROM CONFLUENCE WITH RED CREEK TO HUC BOUNDARY					
BLACK CREEK	MSPA101R00_030	N/A	George, Perry, Stone	Aquatic Life Support	Attaining
LOCATION: NEAR BARBARA FROM CONFLUENCE WITH CYPRESS CREEK TO CONFLUENCE WITH SWEETWATER CREEK					
BLACK CREEK	MSPA099R00_020	N/A	Forrest, Lamar	Aquatic Life Support	Attaining
LOCATION: NEAR PURVIS FROM AMERADA HESS DISCHARGE AT HWY 11 TO CONFLUENCE WITH LITTLE BLACK CREEK				Primary Contact (Recr)	Attaining
BLACK CREEK	MSPA100R00_010	N/A	Perry	Aquatic Life Support	Attaining
LOCATION: NEAR BARBARA FROM CONFLUENCE WITH BEAVERDAM CREEK TO CONFLUENCE WITH CYPRESS CREEK				Primary Contact (Recr)	Attaining
BLACK CREEK	MSPA100R00_030	N/A	Forrest	Aquatic Life Support	Attaining
LOCATION: NEAR BROOKLYN FROM CONFLUENCE WITH BIG CREEK TO CONFLUENCE WITH POPLAR CREEK				Primary Contact (Recr)	Attaining
BLACK CREEK	MSPA099R00_030	N/A	Lamar	Aquatic Life Support	Attaining
LOCATION: NEAR PURVIS FROM CONFLUENCE WITH LITTLE BLACK CREEK AND PERKINS CREEK TO AMERADA HESS OUTFALL					
BLACK CREEK	MSPA099R00_025	N/A	Lamar	Aquatic Life Support	Attaining
LOCATION: NEAR PURVIS FROM AMERADA HESS DISCHARGE AT HWY 11 TO CONFLUENCE WITH LITTLE BLACK				Primary Contact (Recr)	Attaining

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BLACK CREEK	MSPA101R00_020	N/A	George, Jackson	Aquatic Life Support	Attaining
LOCATION: NEAR VESTRY FROM CONFLUENCE WITH SWEETWATER CREEK TO CONFLUENCE WITH RED CREEK					
BLACK CREEK	MSPA100R00_020	N/A	Forrest, Perry	Aquatic Life Support	Attaining
				Primary Contact (Recr)	Attaining
LOCATION: NEAR JANICE FROM CONFLUENCE WITH POPLAR CREEK TO CONFLUENCE WITH BEAVERDAM CREEK					
BLACK CREEK	MSPA099R00_010	N/A	Forrest	Aquatic Life Support	Attaining
				Primary Contact (Recr)	Attaining
LOCATION: NEAR PURVIS CONFLUENCE WITH LITTLE BLACK CREEK TO CONFLUENCE WITH BIG CREEK					
BLUFF CREEK	MSPA098R00_050	MS098BE	Jackson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VANCLEAVE FROM HEADWATERS TO CONFLUENCE WITH MOUNGERS CREEK					
BLUFF CREEK	MSPA098R00_040	MS098BE	Jackson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GAUTIER FROM CONFLUENCE WITH MOUNGERS CREEK TO MOUTH AT WEST PASCAGOULA RIVER					
BOGUE HOMO	MSPA091R00_010	MS091E	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT TUCKERS CROSSING FROM CONFLUENCE WITH MILL CREEK TO WATERSHED BOUNDARY (092)					
BOGUE HOMO	MSPA092R00_010	N/A	Perry	Aquatic Life Support	Attaining
LOCATION: NEAR HENTONVILLE FROM CONFLUENCE WITH BUCK CREEK TO CONFLUENCE WITH LEAF RIVER					
BOGUE HOMO	MSPA092R00_020	N/A	Jones, Perry	Aquatic Life Support	Attaining
LOCATION: NEAR WHITFIELD FROM CONFLUENCE WITH TIGER CREEK TO CONFLUENCE WITH BUCK CREEK					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BOGUE HOMO	MSPA091R00_020	MS091E	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT CLEO FROM LAKE BOGUE HOMO TO CONFLUENCE AT MILL CREEK					
BOSTIC BRANCH	MSPA063R00_100	MS063E1	Clarke	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT STONEWALL FROM HEADWATERS TO CHICKASAWHAY RIVER					
BOWIE CREEK	MSPA081R00_020	N/A	Jefferson Davis, Simpson	Aquatic Life Support	Attaining
LOCATION: NEAR JAMESVILLE FROM HEADWATERS TO CONFLUENCE WITH SKIFFER CREEK				Secondary Contact	Attaining
BOWIE CREEK	MSPA083R00_010	N/A	Covington, Jefferson Davis	Secondary Contact	Attaining
LOCATION: NEAR BASSFIELD FROM MOUTH OF WATERSHED 082 TO MOUTH OF WATERSHED 084					
BOWIE CREEK	MSPA084R00_020	N/A	Covington, Jefferson Davis	Aquatic Life Support	Attaining
LOCATION: NEAR SUMRALL FROM WATERSHED BOUNDARY 083 TO HWY 589 BRIDGE					
BOWIE CREEK	MSPA084R00_010	N/A	Covington, Forrest	Aquatic Life Support	Attaining
LOCATION: NEAR SUMRALL FROM HWY 589 BRIDGE TO CONFLUENCE WITH BOWIE RIVER				Primary Contact (Recr)	Attaining
BOWIE CREEK	MSPA081R00_010	N/A	Covington, Jefferson Davis	Aquatic Life Support	Attaining
LOCATION: AT MT CARMEL FROM CONFLUENCE WITH SKIFFER CREEK TO WATERSHED BOUNDARY (082)				Secondary Contact	Attaining
BOWIE RIVER	MSPA085R00_010	N/A	Forrest	Secondary Contact	Attaining
LOCATION: AT HATTIESBURG FROM I-59 TO MOUTH AT LEAF RIVER					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BRUSHY CREEK	MSPA106R00_010	N/A	George, Greene	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO AL STATE LINE					
BUCKATUNNA CREEK	MSPA066R00_010	N/A	Clarke	Aquatic Life Support	Attaining
LOCATION: NEAR SYKES FROM CONFLUENCE WITH HURRICANE CREEK TO MOUTH OF WATERSHED 068					
BUCKATUNNA CREEK	MSPA066R00_020	N/A	Clarke, Lauderdale	Aquatic Life Support	Attaining
LOCATION: NEAR INCREASE FROM CONFLUENCE WITH BUCKATUNA RIVER AND COKER'S BRANCH TO CONFLUENCE WITH HURRICANE CREEK					
CASTAFFA CREEK	MSPA064R00_020	N/A	Clarke, Jasper	Aquatic Life Support	Attaining
LOCATION: NEAR PACHUTA FROM HEADWATERS TO MOUTH AT SHUBUTA CREEK					
CEDAR CREEK	MSPA074R00_030	N/A	Jasper, Newton	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT QUARTERLIAH CREEK					
CHICKASAWHAY RIVER	MSPA063R00_010	MSUCHKRE1	Clarke	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HWY 45 TO WATERSHED BOUNDARY (065)				Primary Contact (Recr)	Attaining
CHICKASAWHAY RIVER	MSPA063R00_030	MSUCHKRE1	Clarke	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT ENTERPRISE FROM CONFLUENCE OF CHUNKY RIVER AND OKATIBBEE CREEK TO STONEWALL POTW OUTFALL					
CHICKASAWHAY RIVER	MSPA065R00_050	MSUCHKRE1	Clarke, Wayne	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM WATERSHED BOUNDARY (063) TO CONFLUENCE WITH EUCUTTA CREEK					

PASCAGOULA RIVER

PASCAGOULA RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
CHICKASAWHAY RIVER	MSPA063R00_020	MSUCHKRE1	Clarke	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM STONEWALL POTW OUTFALL TO HWY 45					
COLDWATER CREEK	MSPA069R00_020	N/A	Wayne	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BUCATUNNA CREEK					
CYPRESS CREEK	MSPA101R00_040	N/A	Perry	Aquatic Life Support	Attaining
LOCATION: NEAR BARBARA FROM HEADWATERS TO CONFLUENCE WITH BLACK CREEK					
DRY CREEK	MSPA082R00_010	MS082E	Covington	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MT CARMEL FROM HEADWATERS TO MOUTH AT BOWIE CREEK				Secondary Contact	Not Attaining, TMDL Completed
EAST PASCAGOULA RIVER	MSPA096R00_040	MSEPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR COLLTOWN FROM CONFLUENCE WITH CLARK BAYOU TO CONFLUENCE WITH SMEAR BAYOU					
EAST PASCAGOULA RIVER	MSPA096R00_020	MSEPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR PASCAGOULA FROM CONFLUENCE WITH ESCATAWPA RIVER TO KREBS LAKE OUTLET AND MARSH LAKE CUT					
EAST PASCAGOULA RIVER	MSPA096R00_030	MSEPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR ESCATAWPA FROM CONFLUENCE WITH SMEAR BAYOU TO CONFLUENCE WITH ESCATAWPA RIVER					
EAST PASCAGOULA RIVER	MSPA096R00_050	MSEPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR COLLTOWN FROM CONFLUENCE WITH WEST PASCAGOULA RIVER TO CONFLUENCE WITH CLARK BAYOU					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
EAST PASCAGOULA RIVER	MSPA096R00_010	MSEPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: AT PASCAGOULA FROM MARSH LAKE CUT AND KREBS LAKE OUTLET TO MOUTH AT MS SOUND					
ESCATAWPA RIVER	MSPA107R00_010	MS107M3	Jackson	Fish Consumption	Not Attaining, TMDL Completed
				Secondary Contact	Attaining
LOCATION: AT PASCAGOULA FROM MILE 10 (ABOVE CONFLUENCE WITH BLACK CREEK) TO MOUTH					
ESCATAWPA RIVER	MSPA107R00_020	MS107M3	Jackson	Fish Consumption	Not Attaining, TMDL Completed
				Secondary Contact	Attaining
LOCATION: NEAR PASCAGOULA FROM IP CANAL TO MILE 10					
ESCATAWPA RIVER	MSPA107R00_030	MS107M1	George, Jackson	Aquatic Life Support	Attaining
				Fish Consumption	Not Attaining, TMDL Completed
LOCATION: NEAR AGRICOLA FROM MS/AL STATE LINE TO SPRING CREEK					
ESCATAWPA RIVER	MSPA107R00_025	MS107M2	Jackson	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: NEAR AGRICOLA FROM SPRING CREEK TO IP CANAL					
FIVEMILE CREEK	MSPA068R00_010	N/A	Clarke	Aquatic Life Support	Attaining
LOCATION: NEAR CARMICHAEL FROM HEADWATERS TO CONFLUENCE WITH CEDAR CREEK					
FLINT CREEK	MSPA102R00_060	N/A	Stone	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT RED CREEK					
GAINES CREEK	MSPA095R00_010	N/A	Greene, Perry	Aquatic Life Support	Attaining
LOCATION: NEAR NEHTONVILLE FROM CONFLUENCE OF PINEY WOODS CREEK AND SAND HILL CREEK TO CONFLUENCE WITH LEAF RIVER					

PASCAGOULA RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
HORTONS' MILL CREEK	MSPA065R00_100	N/A	Wayne	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT CHICKASAWHAY RIVER					
HOUSTON CREEK	MSPA059R00_020	N/A	Kemper, Neshoba	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT OKATIBBEE CREEK					
INDIAN CREEK	MSPA096R00_110	N/A	George	Aquatic Life Support	Attaining
LOCATION: NEAR BASIN FROM HEADWATERS TO MOUTH AT PASCAGOULA RIVER					
IRBY MILL CREEK	MSPA066R00_030	N/A	Clarke	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO BUCATUNNA CREEK					
KEYS MILL CREEK	MSPA075R00_100	N/A	Smith	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT LEAF RIVER					
KITRELL CREEK	MSPA071R00_050	N/A	Greene	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BIG CREEK					
LEAF RIVER	MSPA086R00_030	MS086E	Forrest	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT HATTIESBURG FROM CONFLUENCE OF BOWIE RIVER TO HATTIESBURG POTW OUTFALL					
LEAF RIVER	MSPA086R00_010	MS086E	Forrest, Perry	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MAHNED FROM CONFLUENCE WITH REESE CREEK TO CONFLUENCE WITH TALLAHALA CREEK					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LEAF RIVER	MSPA086R00_020	MS086E	Forrest	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT HATTIESBURG FROM HATTIESBURG OUTFALL TO CONFLUENCE WITH REESE CREEK					
LEONARDS CREEK	MSPA080R00_050	N/A	Covington	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT OKATOMA CREEK					
LITTLE BLACK CREEK	MSPA099R00_100	N/A	Forrest, Lamar	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS AT WATER PARK TO MOUTH AT BLACK CREEK					
LITTLE CEDAR CREEK	MSPA096R00_300	N/A	George	Aquatic Life Support	Attaining
LOCATION: NEAR LUCEDALE FROM HEADWATERS TO CONFLUENCE WITH BIG CEDAR CREEK					
LONG CREEK	MSPA067R00_010	N/A	Clarke, Lauderdale	Aquatic Life Support	Attaining
LOCATION: NEAR MIDDLETON FROM CONFLUENCE WITH GAY'S BRANCH NEAR PLEASANT HILL TO CONFLUENCE WITH BUCKATUNNA CREEK AT MOUTH WATERSHED 068					
LOWER SOUINLOVEY CREEK	MSPA062R00_010	N/A	Clarke	Aquatic Life Support	Attaining
LOCATION: AT PACHUTA FROM I-59 TO MOUTH AT CHICKASAWHAY RIVER					
MASON CREEK	MSPA071R00_030	MS071ME	Greene	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT CARSON CITY FROM CONFLUENCE OF EAST MASON CREEK TO CONFLUENCE WITH BIG CREEK					
MASON CREEK	MSPA071R00_040	MS071ME	Greene	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH EAST MASON CREEK					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
MAYNOR CREEK	MSPA070R00_030	N/A	Wayne	Aquatic Life Support	Attaining
LOCATION: FROM MAYNOR CREEK WATER PARK TO CONFLUENCE WITH BIG CREEK					
MEADOW CREEK	MSPA072R00_010	N/A	Greene	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT CHICKASAWHAY RIVER					
MONROE CREEK	MSPA099R00_070	N/A	Lamar	Aquatic Life Support	Attaining
LOCATION: NEAR OLOH FROM HEADWATERS TO CONFLUENCE WITH BLACK CREEK AT HWY 98					
MYERS CREEK	MSPA086R00_040	N/A	Forrest	Secondary Contact	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT LEAF RIVER					
OAKAHAY CREEK	MSPA076R00_020	N/A	Smith	Aquatic Life Support	Attaining
LOCATION: NEAR RALEIGH FROM CONFLUENCE WITH CLEAR CREEK TO CONFLUENCE WITH COLE BRANCH				Secondary Contact	Attaining
OAKAHAY CREEK	MSPA076R00_010	N/A	Covington, Smith	Aquatic Life Support	Attaining
LOCATION: AT MIZE FROM CONFLUENCE WITH COLE BRANCH TO WATESHED BOUNDARY (075)				Secondary Contact	Attaining
OAKAHAY CREEK	MSPA076R00_030	MS076E	Scott, Smith	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LENON FROM HEADWATERS TO CONFLUENCE WITH CLEAR CREEK					
Oakey Woods Creek	MSPA078R00_010	N/A	Covington, Jones	Aquatic Life Support	Attaining
LOCATION: NEAR SAND HILL FROM CONFLUENCE WITH STATION CREEK TO CONFLUENCE WITH LEAF RIVER				Secondary Contact	Attaining

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
OAKEY WOODS CREEK	MSPA078R00_020	N/A	Covington	Aquatic Life Support	Attaining
LOCATION: NEAR REDDOCH FROM HEADWATERS TO CONFLUENCE WITH STATION CREEK				Secondary Contact	Attaining
OKATIBBEE CREEK	MSPA060R00_030	N/A	Lauderdale	Aquatic Life Support	Attaining
LOCATION: NEAR MERIDIAN FROM OKATIBBEE RESERVOIR TO HWY 19					
OKATIBBEE CREEK	MSPA060R00_020	N/A	Lauderdale	Aquatic Life Support	Attaining
LOCATION: FROM HWY 19 TO CONFLUENCE WITH SOWASHEE CREEK					
OKATIBBEE CREEK	MSPA060R00_010	MS060	Clarke, Lauderdale	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT ARUNDEL FROM CONFLUENCE WITH SOWASHEE CREEK TO CONFLUENCE WITH CHUNKY RIVER					
OKATIBBEE CREEK	MSPA059R00_010	N/A	Kemper, Lauderdale, Neshoba	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO OKATIBBEE RESERVOIR				Secondary Contact	Attaining
OKATOMA CREEK	MSPA080R00_010	MS0802M	Covington, Forrest	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH NICHOLS BRANCH TO CONFLUENCE WITH BOWIE RIVER AT WATERSHED BOUNDARY				Primary Contact (Recr)	Not Attaining, TMDL Completed
OKATOMA CREEK	MSPA080R00_015	MS0802M	Covington	Aquatic Life Support	Attaining
LOCATION: AT SEMINARY FROM CONFLUENCE WITH BEG SWAMP CREEK TO CONFLUENCE WITH NICHOLS BRANCH				Primary Contact (Recr)	Not Attaining, TMDL Completed
OKATOMA CREEK	MSPA080R00_020	N/A	Covington	Aquatic Life Support	Attaining
LOCATION: FROM SANDERSON FARM OUTFALL TO CONFLUENCE WITH NICHOLS BRANCH					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
OKATOMA CREEK	MSPA080R00_030	N/A	Covington, Simpson	Aquatic Life Support	Attaining
LOCATION: AT MOUNT OLIVE FROM CONFLUENCE WITH GOODWIN CREEK TO SANDERSON FARMS OUTFALL				Secondary Contact	Attaining
OKATOMA CREEK	MSPA080R00_040	N/A	Simpson	Aquatic Life Support	Attaining
LOCATION: NEAR MAGEE FROM HEADWATERS TO CONFLUENCE WITH GOODWIN CREEK				Secondary Contact	Attaining
PASCAGOULA RIVER	MSPA096R00_060	MSPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR THREE RIVERS FROM CUMBEST BLUFF TO CONFLUENCE WITH WEST PASCAGOULA RIVER					
PASCAGOULA RIVER	MSPA096R00_080	MSPASRM1	George, Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR BASIN FROM BIG CREEK TO CONFLUENCE WITH BIG CEDAR CREEK					
PASCAGOULA RIVER	MSPA096R00_090	MSPASRM1	George	Fish Consumption	Not Attaining
LOCATION: NEAR BENNDALE FROM 6 MILES NORTH OF HWY 26 TO CONFLUENCE WITH BIG CREEK					
PASCAGOULA RIVER	MSPA096R00_065	MSPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: FROM WADE BRIDGE TO CUMBEST BLUFF					
PASCAGOULA RIVER	MSPA096R00_070	MSPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR WADE FROM CONFLUENCE WITH BIG CEDAR CREEK TO WADE BRIDGE					
PASCAGOULA RIVER	MSPA096R00_100	MSPASRM1	George	Fish Consumption	Not Attaining
LOCATION: NEAR MERRILL FROM HUC BOUNDARY, CONFLUENCE WITH CHICKASAWHAY AND LEAF RIVER TO 6 MILES NORTH OF HWY 26					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
POPLAR CREEK	MSPA100R00_060	N/A	Forrest	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BLACK CREEK					
POTTERCHITTO CREEK	MSPA057R00_040	N/A	Newton	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH TARLOW CREEK TO CONFLUENCE WITH CHUNKY CREEK					
RED CREEK	MSPA102R00_020	N/A	Forrest, Pearl River, Stone	Aquatic Life Support	Attaining
LOCATION: NEAR WIGGINS FROM CONFLUENCE WITH HICKORY CREEK TO HWY 49					
RED CREEK	MSPA102R00_030	N/A	Lamar, Pearl River	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT LUMBERTON FROM CONFLUENCE WITH DRY BRANCH TO CONFLUENCE WITH HICKORY CREEK					
RED CREEK	MSPA102R00_040	N/A	Lamar	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LUMBERTON FROM HEADWATER TO CONFLUENCE WITH DRY BRANCH					
RED CREEK	MSPA103R00_020	MS103RM	George, Stone	Aquatic Life Support	Attaining
LOCATION: NEAR BEATRICE FROM WATERSHED BOUNDARY (102) TO CONFLUENCE WITH BLUFF CREEK				Primary Contact (Recr)	Not Attaining, TMDL Completed
RED CREEK	MSPA102R00_010	N/A	Stone	Aquatic Life Support	Attaining
LOCATION: NEAR WIGGINS FROM HWY 49 TO CONFLUENCE WITH FLINT CREEK					
RED CREEK	MSPA103R00_010	MS103RM	George, Jackson	Aquatic Life Support	Attaining
LOCATION: AT VESTRY FROM CONFLUENCE WITH BLUFF CREEK AT RUBLE TO WATERSHED BOUNDARY (101)				Primary Contact (Recr)	Not Attaining, TMDL Completed

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
SHELTON CREEK	MSPA080R00_060	N/A	Covington, Jones	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT OKATOMA CREEK					
SKIFFER CREEK	MSPA081R00_030	N/A	Jefferson Davis, Simpson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR JAMESVILLE FROM HEADWATERS TO CONFLUENCE WITH BOWIE CREEK					
SOWASHEE CREEK	MSPA061R00_010	MS061	Lauderdale	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM MERIDIAN POTW OUTFALL TO CONFLUENCE WITH OKATIBBEE CREEK					
STATION CREEK	MSPA078R00_030	N/A	Covington	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT OAKLEY WOODS CREEK					
Sowashee Creek	MSPA061R00_020	MS061	Lauderdale	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE WITH NANABE CREEK TO MERIDIAN POTW OUTFALL					
TALLAHALA CREEK	MSPA087R00_020	MS087T	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT LAUREL FROM MASONITE NORTH DISCHARGE TO LAUREL SOUTH POTW OUTFALL					
TALLAHALA CREEK	MSPA087R00_030	MS087T	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT LAUREL FROM LAUREL EAST FACILITY TO MASONITE OUTFALL					
TALLAHALA CREEK	MSPA087R00_040	MS087T	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT LAUREL FROM CONFLUENCE WITH BIG REEDY CREEK TO LAUREL EAST FACILITY					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
TALLAHALA CREEK	MSPA089R00_010	N/A	Perry	Secondary Contact	Attaining
LOCATION: NEAR RUNNELSTOWN FROM CONFLUENCE WITH CHAPEL BRANCH TO MOUTH AT LEAF RIVER					
TALLAHALA CREEK	MSPA089R00_030	N/A	Jones	Secondary Contact	Attaining
LOCATION: AT ELLISVILLE FROM WATERSHED BOUNDARY (088) TO CONFLUENCE WITH BEAR					
TALLAHALA CREEK	MSPA089R00_025	N/A	Jones	Secondary Contact	Attaining
LOCATION: FROM THE CONFLUENCE WITH BEAR CREEK TO CONFLUENCE WITH WOODARD'S MILL CREEK					
TALLAHALA CREEK	MSPA087R00_065	N/A	Jasper, Jones	Aquatic Life Support	Attaining
LOCATION: TALLAHALA CREEK FROM CONFLUENCE WITH MCVAY CREEK TO CONFLUENCE WITH BIG REEDY CREEK					
TALLAHALA CREEK	MSPA087R00_070	N/A	Jasper	Aquatic Life Support	Attaining
LOCATION: NEAR MONTROSE FROM CONFLUENCE WITH THOMPSON CREEK TO CONFLUENCE WITH MCVAY CREEK					
TALLAHALA CREEK	MSPA089R00_020	N/A	Forrest, Jones, Perry	Secondary Contact	Attaining
LOCATION: NEAR RUNNELSTOWN FROM CONFLUENCE WITH WOODARD'S MILL CREEK TO CONFLUENCE WITH CHAPEL BRANCH					
TALLAHALA CREEK	MSPA087R00_010	MS087T	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT LAUREL FROM LAUREL SOUTH POTW OUTFALL TO CONFLUENCE WITH TALLAHOMA CREEK					
TALLAHATTAH CREEK	MSPA087R00_050	N/A	Jasper	Aquatic Life Support	Attaining
LOCATION: NEAR HEIDELBERG FROM HEADWATERS TO CONFLUENCE WITH TALLAHALA CREEK					

PASCAGOULA RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
TALLAHOMA CREEK	MSPA088R00_020	MS088T	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT LAUREL FROM CONFLUENCE WITH TARAPIN CREEK TO CONFLUENCE WITH HORSE CREEK					
TALLAHOMA CREEK	MSPA088R00_010	MS088T	Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT ELLISVILLE FROM CONFLUENCE WITH HORSE CREEK TO CONFLUENCE WITH TALLAHALA CREEK AT WATERSHED BOUNDARY (089)					
TALLAHOMA CREEK	MSPA088R00_030	MS088T	Jasper, Jones	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LAUREL FROM CONFLUENCE WITH PINEY BRANCH TO CONFLUENCE WITH TARAPIN CREEK					
TEN MILE CREEK	MSPA102R00_070	N/A	Stone	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT RED CREEK					
THOMPSON CREEK	MSPA093R00_010	N/A	Perry	Aquatic Life Support	Attaining
LOCATION: NEAR RICHTON FROM CONFLUENCE WITH PINE CREEK TO CONFLUENCE WITH LEAF RIVER					
THOMPSON CREEK	MSPA093R00_030	MS093T2E	Wayne	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MULBERRY FROM CONFLUENCE WITH LITTLE THOMPSON CREEK TO CONFLUENCE WITH WEST LITTLE THOMPSON CREEK					
THOMPSON CREEK	MSPA093R00_020	MS093T2E	Perry, Wayne	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR RICHTON FROM CONFLUENCE OF WEST LITTLE THOMPSON CREEK TO RICHTON POTW					
THOMPSON CREEK	MSPA093R00_040	MS093T2E	Wayne	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STRENGTHFORD FROM HEADWATERS TO CONFLUENCE WITH LITTLE THOMPSON CREEK					

PASCAGOULA RIVER

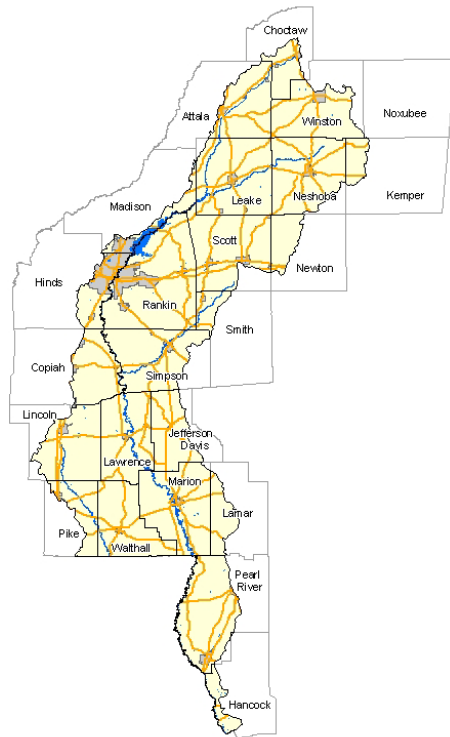
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
UNNAMED TRIB. TO LEAF RIVER	MSPA090R00_050	MS090M2	Perry	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT BEAUMONT FROM HOOD INDUSTRIES OUTFALL TO CONFLUENCE WITH LEAF RIVER					
UPPER LEAF RIVER	MSPA073R00_020	N/A	Smith	Aquatic Life Support	Attaining
LOCATION: NEAR SYLVARENA FROM CONFLUENCE WITH ICHUSA CREEK TO WATERSHED BOUNDARY (075)					
UPPER LEAF RIVER	MSPA073R00_010	N/A	Smith	Aquatic Life Support	Attaining
LOCATION: NEAR OTHO FROM CONFLUENCE WITH TALLABOGUE CREEK TO CONFLUENCE WITH ICHUSA CREEK					
UPPER LEAF RIVER	MSPA073R00_005	MS073UE	Scott, Smith	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: UPPER LEAF RIVER FROM HEADWATERS TO TALLABOGUE CR.					
UPPER SOUINLOVEY CREEK	MSPA062R00_020	N/A	Clarke, Jasper	Aquatic Life Support	Attaining
LOCATION: NEAR ROSE HILL FROM HEADWATERS TO I-59					
WEST BOWIE CREEK	MSPA083R00_020	N/A	Jefferson Davis	Secondary Contact	Attaining
LOCATION: NEAR BASSFIELD FROM HEADWATERS TO CONFLUENCE WITH BOWIE CREEK					
WEST LITTLE THOMPSON CREEK	MSPA093R00_050	MS093T1E	Wayne	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MULBERRY FROM HEADWATERS TO MOUTH OF THOMPSON CREEK					
WEST PASCAGOULA RIVER	MSPA098R00_020	MSWPASRM2	Jackson	Fish Consumption	Not Attaining
LOCATION: AT GAUTIER FROM CONFLUENCE WITH BLUFF CREEK TO CONFLUENCE WITH SIOUX CREEK					

PASCAGOULA RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
WEST PASCAGOULA RIVER	MSPA098R00_030	MSWPASRM1	Jackson	Fish Consumption	Not Attaining
LOCATION: NEAR GAUTIER FROM CONFLUENCE WITH EAST PASCAGOULA RIVER TO CONFLUENCE WITH BLUFF CREEK					
WEST PASCAGOULA RIVER	MSPA098R00_010	MSWPASRM2	Jackson	Fish Consumption	Not Attaining
LOCATION: AT GAUTIER FROM CONFLUENCE WITH SIOUX BAYOU TO MOUTH AT MS SOUND					
WEST TALLAHALA CREEK	MSPA074R00_020	MS074M2	Jasper, Smith	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LOUIN FROM CONFLUENCE WITH QUARTERLIAH CREEK TO WATERSHED BOUNDARY (075)					
WEST TALLAHALA CREEK	MSPA074R00_025	MS074M2	Smith	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE WITH PRAIRIE CREEK TO CONFLUENCE WITH BEAVERDAM CREEK AT LEAF RIVER					
WEST TALLAHALA CREEK	MSPA074R00_010	MS074M2	Jasper, Newton, Smith	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LAKE FROM HEADWATERS TO CONFLUENCE WITH QUARTERLIAH CREEK					
WHISKEY CREEK	MSPA097R00_010	MS097E	George, Perry	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TAYLOR HILL FROM HEADWATERS TO CONFLUENCE WITH PASCAGOULA RIVER					
YELLOW CREEK	MSPA065R00_200	N/A	Wayne	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH CHICKASAWHAY RIVER					

PEARL RIVER BASIN

Basin Description

The Pearl River Basin is located in east-central and southwest Mississippi and in the southeastern part of Louisiana (Figure 48). The basin spans from the headwaters in east-central Mississippi near Philadelphia, through central Mississippi, to the coast. The Pearl River itself is approximately 490 miles long, drains an area of 8,760 square miles and comprises all or part of 24 counties in east-central and southern Mississippi. This area



constitutes the fifth-largest flood-plain in the United States. Some significant tributaries to the river include the Yockanookany River, Bogue Chitto River, and Strong River. The Pearl River is formed in Neshoba County, by the confluence of Bogue Chitto, Nanaway and Tallahaga Creeks. The river flows southwesterly for about 146 miles to the Ross Barnett Reservoir at Jackson, then 217 miles in a southerly direction to the head of its outlet channels, the West Pearl and Pearl Rivers. These channels continue in the same general direction for 44 and 48 miles, respectively, and empty into Lake Borgne in Louisiana and the Mississippi Sound. The West Pearl River lies entirely within the State of Louisiana. The lower 61 miles of Pearl River form part of the boundary between Mississippi and Louisiana.

Figure 48: Pearl River Basin (MDEQ)

Much of the upper two-thirds of the Pearl River Basin consist of gently rolling to hilly terrain. In the southern part of the basin, the land is much flatter as the low, rolling forested hills give way to lowlands and marshes near the coast. The only large urban area in this basin is the Jackson metropolitan area which is the most populous part of the state.

The population for counties within the Pearl River Basin was estimated in 2000 at 956,574. There has been an 11% increase since 1990. From an entire basin standpoint, the greatest concentration of people is generally found in the Jackson metropolitan area with the average population density being approximately 154 people per square mile.

Land Use

The primary land use in the Pearl River Basin is forestry or silviculture but land use patterns in portions of the Pearl River Basin are slowly changing (Figure 49). Traditional row cropland in the Upper Pearl River basin is being forested and the effects of increased urbanization are becoming more evident throughout the basin. The transition to urban landscape is especially evident around the Jackson Metropolitan area.

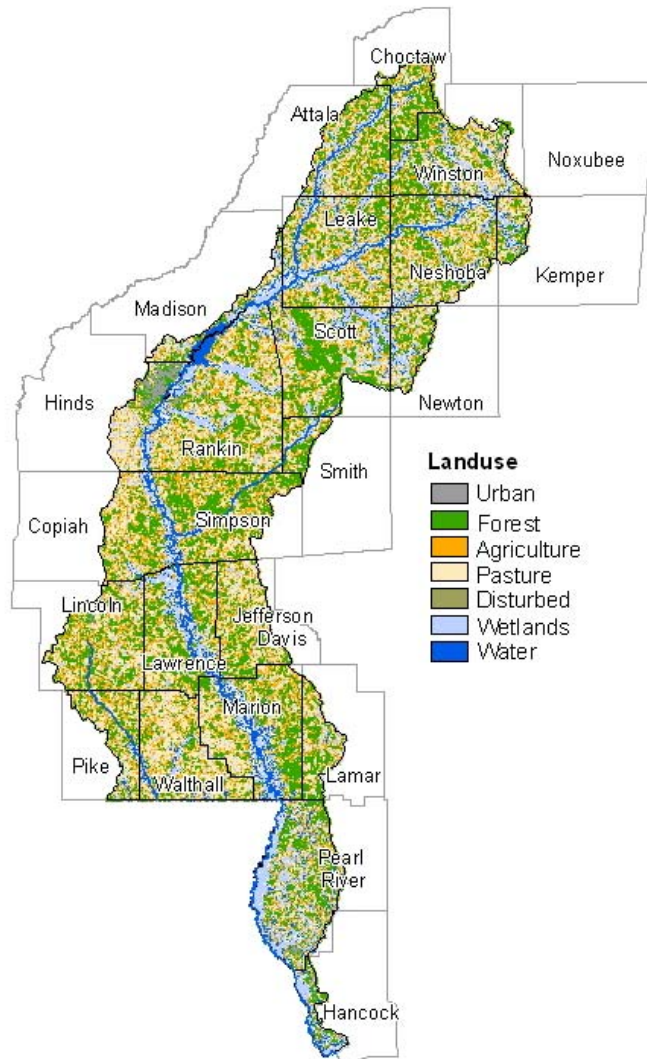


Figure 49: Major Land Cover-Pearl River Basin

Urban areas make up only 1% of the basin's total land cover (Figure 50). *Forest* areas, evergreen, deciduous and mixed-forests, represent the dominant land cover making up 43% of the total. *Wetland* areas, forested and non-forested wetlands and coastal marsh, comprise 10% of the total land cover while *Water* resources, streams, lakes, reservoir and estuaries, only represent 1%. *Agricultural* and *Pasture* land features make up 27% of the land features. *Disturbed* areas including strip mines, gravel pits, sandy areas, barren, and transitional areas comprise the remaining 18% of the basin.

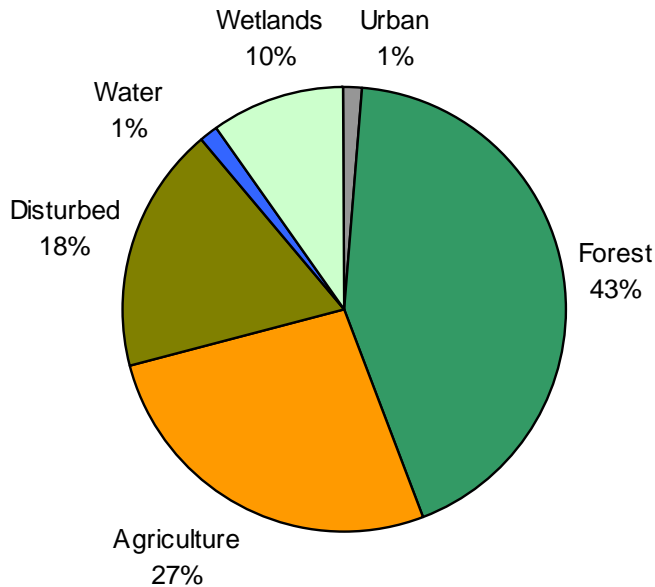


Figure 50: Distribution of Land Cover in the Pearl River Basin (MARIS)

Water Resources

The Pearl River Basin has a total of 16,300 miles of perennial and intermittent rivers and streams. According to the state's water quality standards (WQS), the majority of these water bodies are classified as Fish and Wildlife streams. In addition to the Fish and Wildlife Classification, portions of the Pearl, Strong, and Bogue Chitto Rivers are classified for Recreation. A portion of the Pearl River near Jackson is also classified as Public Water Supply along with the Ross Barnett Reservoir; both are used as a source of raw water supply for the city of Jackson. The majority of the streams are deep to moderately deep, fast flowing perennial streams.

Streams in much of the upper and middle portions of the basin generally have fairly fast, deep flows for a short time after rain events and relatively shallow base flows. Principal tributaries of the Pearl River in the upper and middle reaches include Yockanookany

River, Lobutch Creek, Tuscalometa Creek, Pelahatchie Creek, Silver Creek, Fair River, Holiday Creek, White Sands Creek and the Strong River.

Streams in most of the lower Pearl basin usually flow at a fast pace and have a deep base flow. Major streams in this portion of the basin include the Bogue Chitto River, Hobolochitto Creek, Pushepatapa Creek, Magees Creek and Upper Little Creek. The majority of flow in the lower end of the Pearl River has historically been diverted to Louisiana due to channel alterations. These alterations left the original river channel near Picayune essentially dry during low-flow conditions. This situation was addressed in 1997 and 1998 through a cooperative effort between the states of Mississippi and Louisiana and local entities, which called for construction of a weir and closures to restore flows into the original channel. The project was completed in 1998, but is still being monitored by the U.S. Army Corp of Engineers. Near the Mississippi Gulf Coast, the Pearl River becomes estuarine where it is bounded by salt marsh and is tidally influenced.

Within this basin, the major lake and reservoir feature is the Ross Barnett Reservoir, an impoundment of some 33,000 acres, located just north of Jackson and stretching about 43 miles in length. Located near the state's largest urban area, the reservoir is used extensively for recreation. In addition to the Ross Barnett Reservoir which is classified for recreation and public water supply, two other lakes in the basin (Lake Dixie Springs and Lake Columbia) are also classified for Recreation according to the state's WQS. Several small reservoirs and lakes can also be found in the Pearl River Basin including Roosevelt State Park Lake near Morton.

As with the Pascagoula River and Coastal Streams Basins, an important aspect of the Pearl River Basin is the role it plays in maintaining the health and diversity of the Mississippi Sound. The Pearl River Basin, along with the Pascagoula River Basin, supplies the largest portions of the fresh water entering the Mississippi Sound. Near the mouth, the transition from freshwater to saltwater has created an extensive salt marsh resource in Hancock County. Although not as large as the Coastal Streams Basin and the Pascagoula River Basin, the total coastal marsh (marsh below the 15 ft contour) within Mississippi's Pearl River Basin is approximately 9,000 acres, making up roughly 40% of the total marsh habitat in Hancock County.

In terms of biological resources, the Pearl River Basin has 9 federally threatened and 1 federally endangered species. This basin also includes several water bodies proposed for review as potential Mississippi Natural and Scenic Waterways System water bodies: Pearl River, Strong River, Bogue Chitto River, and Magees Creek.

Surface Water Assessment

Designated Use Support

The assessments for the Pearl River Basin were made based on data from 155 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project and the §303(d) fecal coliform monitoring project (Figure 51). The perennial streams where the monitoring stations were located

represented the mainstem drainage for each 11-digit watershed in the basin. Use support status for the basin is presented and summarized with causes and sources of impairment.

There are currently five fish advisories on waters in the Pearl River Basin. For more information on these advisories, see Part III Public Health Concerns and Advisories in the 2004 §305(b) report.

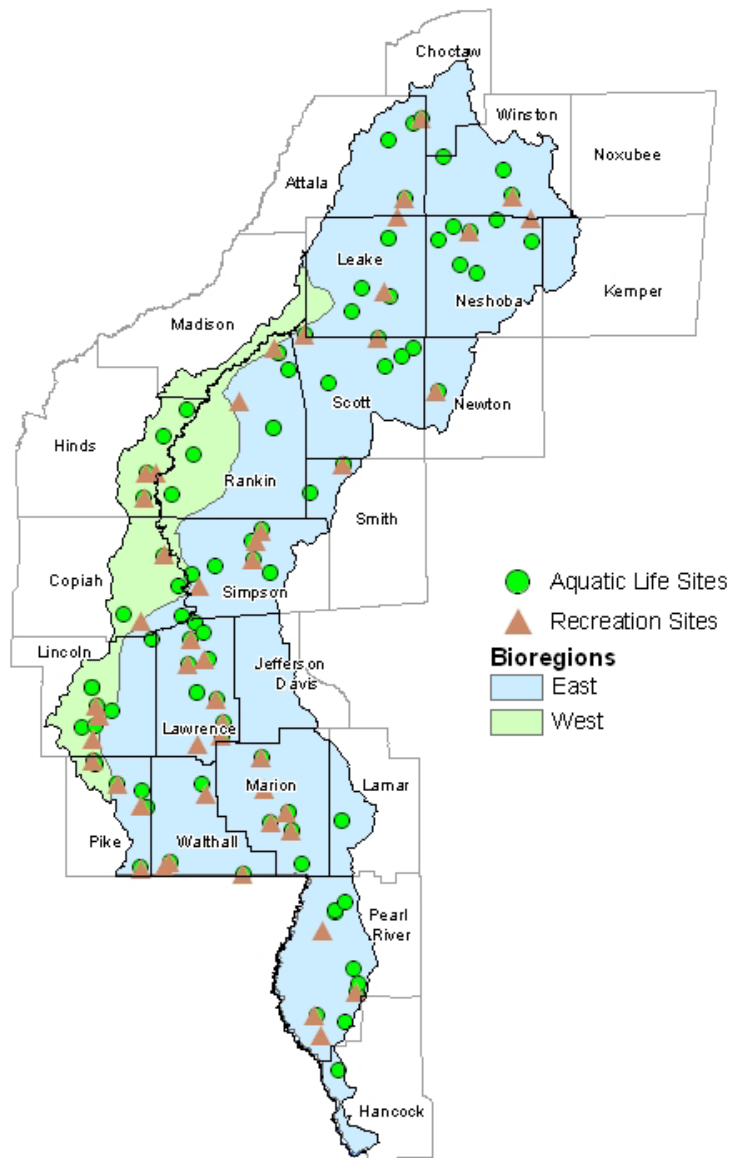


Figure 51: Pearl River Basin Monitoring Stations

MDEQ assessed approximately 25% (1,375 miles) of the total 5,560 perennial miles of streams and rivers in the Pearl River Basin. The status of water quality on the remaining 75% (4,185 miles) of the basin's perennial rivers and streams is unknown. The majority of stream miles (66%) in the Pearl River Basin is composed of intermittent streams and therefore is not readily assessable. A summary of use support for the basin's assessed rivers and streams is found in Table 21 and Figure 52. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

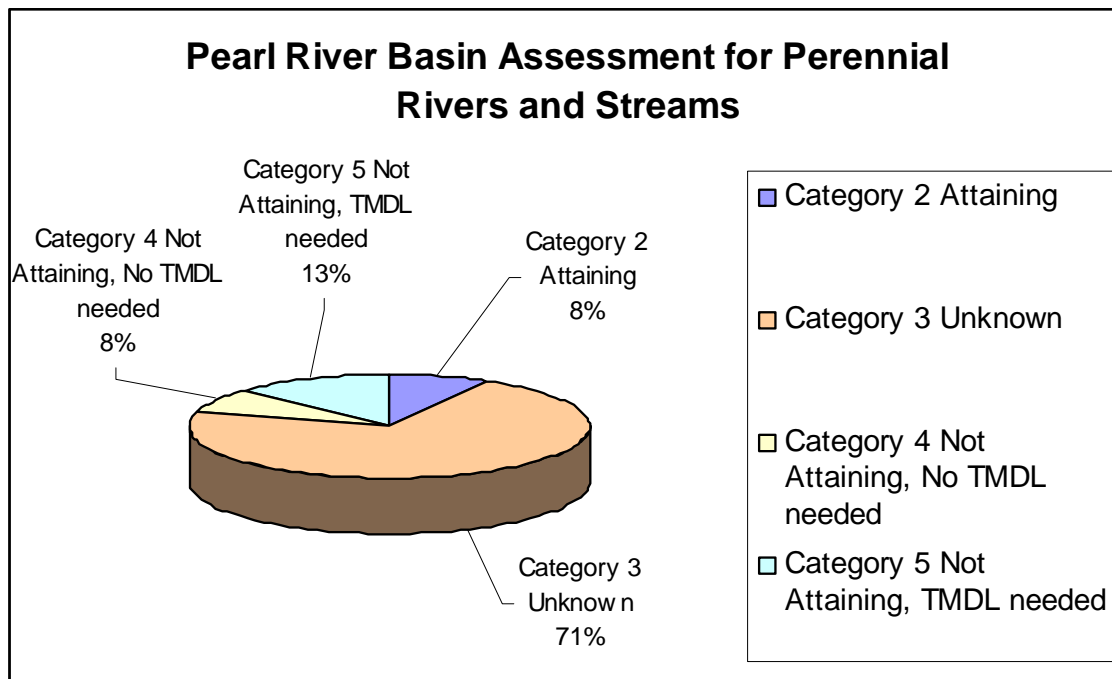
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the Pearl River Basin, approximately 8% are in category 2 for attaining some uses but unknown for remaining water body uses, and 8% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 13% of the assessed water bodies. The status of the remaining 71% of water bodies in the Pearl River Basin is unknown and these waters are reflected in category 3. Of the 743 miles of waters in category 5, 63% (470 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the Pearl River Basin section of the 2004 §303(d) list. Please refer to Table 25 at the end of the Pearl River Basin section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 21: Summary of Pearl River Basin Use Support Assessments-Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	469
Category 3: Unknown/Insufficient Data for Assessment	14,925
Intermittent Miles	10,739
Perennial Miles	4,186
Category 4: Not Attaining – No TMDL Needed	163
A. TMDL Completed	163
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	743
A. Pollutant Identified	273
B. Biological Impairment- Cause Unknown	470
Total Miles	16,300

**Figure 52: Pearl River Basin Assessment of Perennial Rivers and Streams**

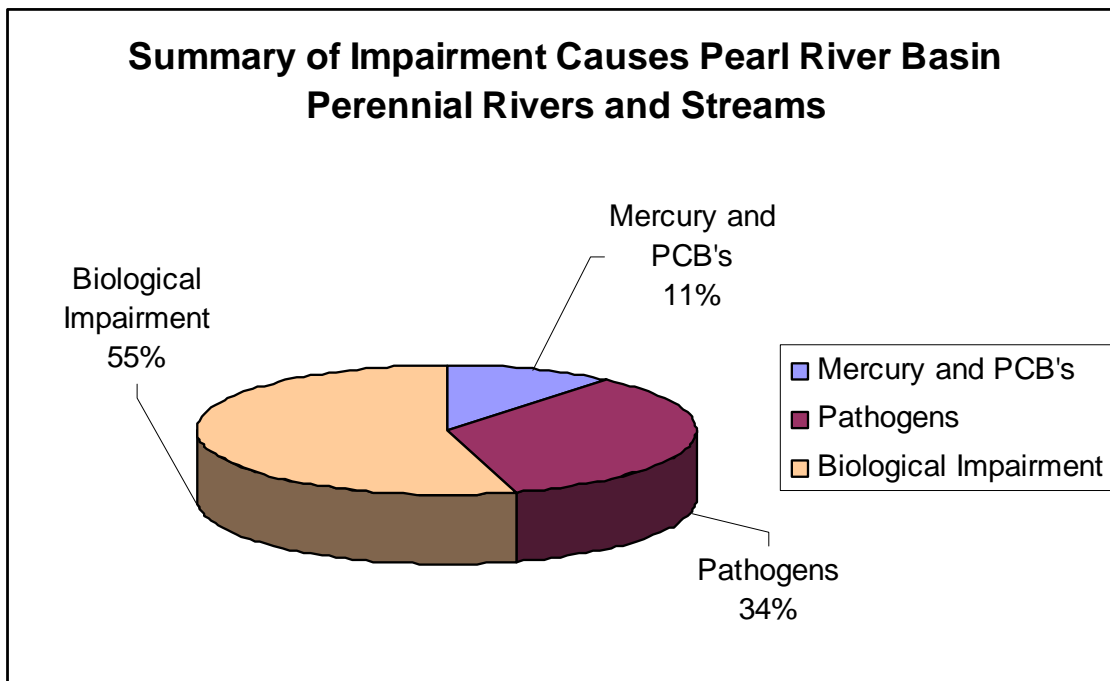
Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were evaluated for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 22 and Figure 53. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. For these impaired waters, the next step in the state's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. Other causes of impairment noted in the basin are from pathogens, mercury, and PCBs. The source of pathogen and biological impairments in the Pearl River Basin is unknown. As stated above, the majority of impairment was determined to be biological and therefore sources of the impairment are yet to be determined. Other sources of impairment include mercury which is believed to result from a combination of natural geologic conditions, old industrial point sources, and atmospheric deposition from coal fired plants and incinerators and runoff from industrial point sources for the PCBs.

Table 22: Summary of Impairment Causes-Pearl River Basin

Cause Categories	Total Miles
PCB's	3
Mercury	120
Pathogens	377
Biological Impairment	595
Total	1,095

* Note: Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

**Figure 53: Pearl River Basin Summary of Impairment Causes for Perennial Rivers and Streams**

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the Pearl River Basin's assessed stream and river miles, approximately 535 miles of perennial rivers and streams are attaining their aquatic life use, while 595 miles were assessed as not attaining and are considered impaired (Table 23 and Figure 54). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figures 55-56 depict geo-referenced coverages of the Aquatic Life Use Support assessments for the Pearl River Basin.

Table 23: Aquatic Life Use Support-Pearl River Basin

Status	Miles
Attaining	535
Unknown	4,430
Total Not Attaining	595
TMDL not needed	0
TMDL needed	595
Total	5,560

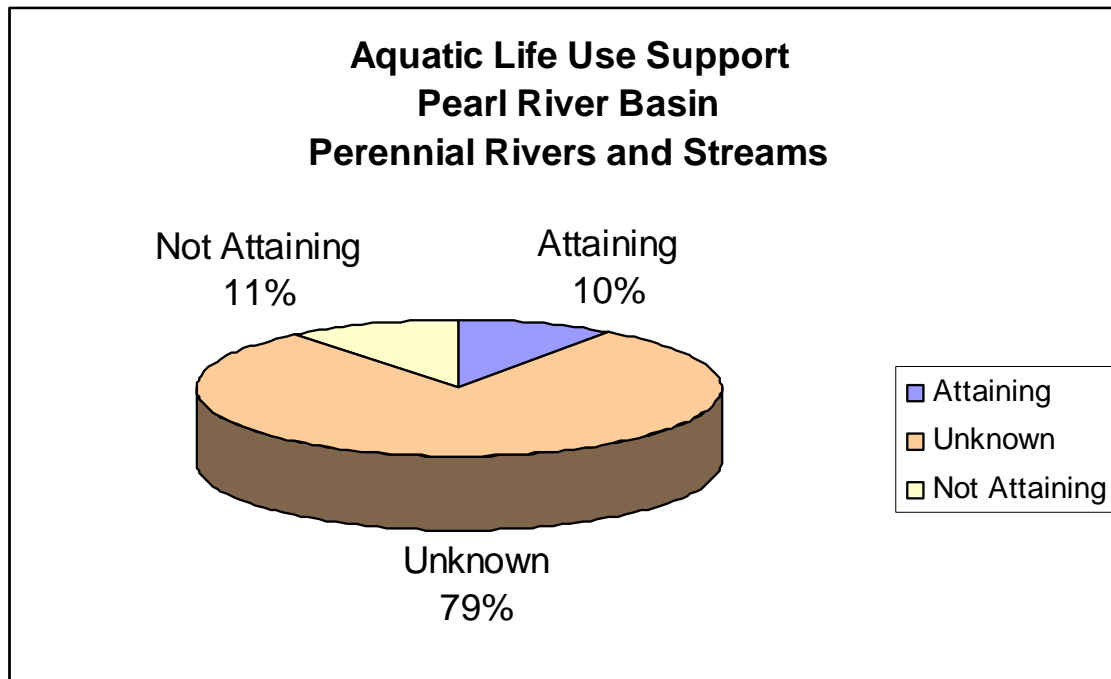


Figure 54: Aquatic Life Use Support-Pearl River Basin

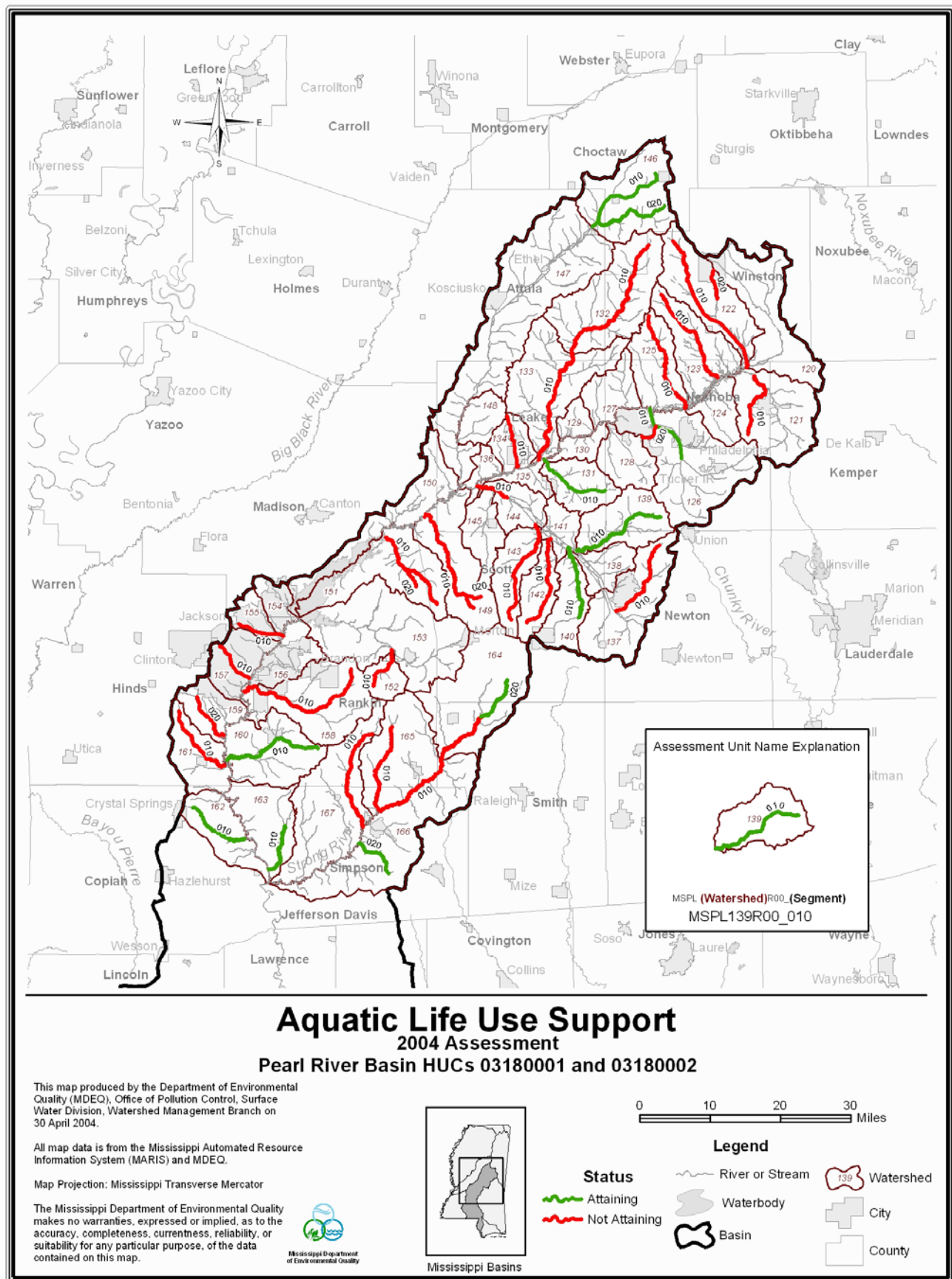


Figure 55: Aquatic Life Use Support Map-Upper Pearl River Basin

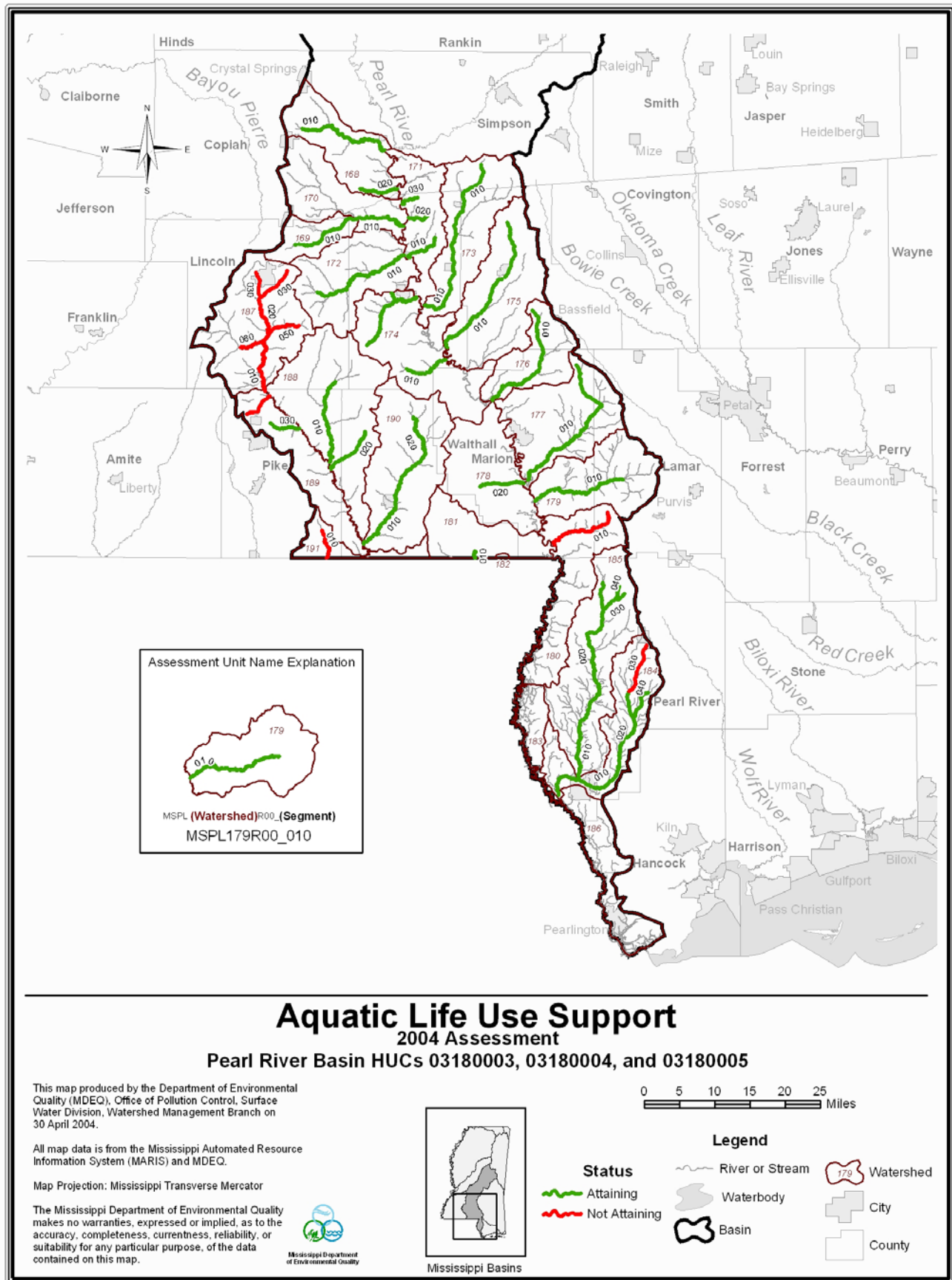


Figure 56: Aquatic Life Use Support Map-Lower Pearl River Basin

Recreation Use Support

Data collected as part of a statewide §303(d) fecal coliform project were used to make the Recreation Use Support assessments. Of the Pearl River Basin's assessed stream and river miles, approximately 524 miles of perennial rivers and streams are attaining their recreation use, while 377 miles were assessed as not attaining and are considered impaired (Table 24 and Figure 57). Figures 58-59 depict geo-referenced coverages of the Recreation Use Support assessments for the Pearl River Basin.

Table 24: Recreation Use Support-Pearl River Basin

Status	Miles
Attaining	524
Unknown	4,659
Total Not Attaining	377
TMDL not needed	104
TMDL needed	273
Total	5,560

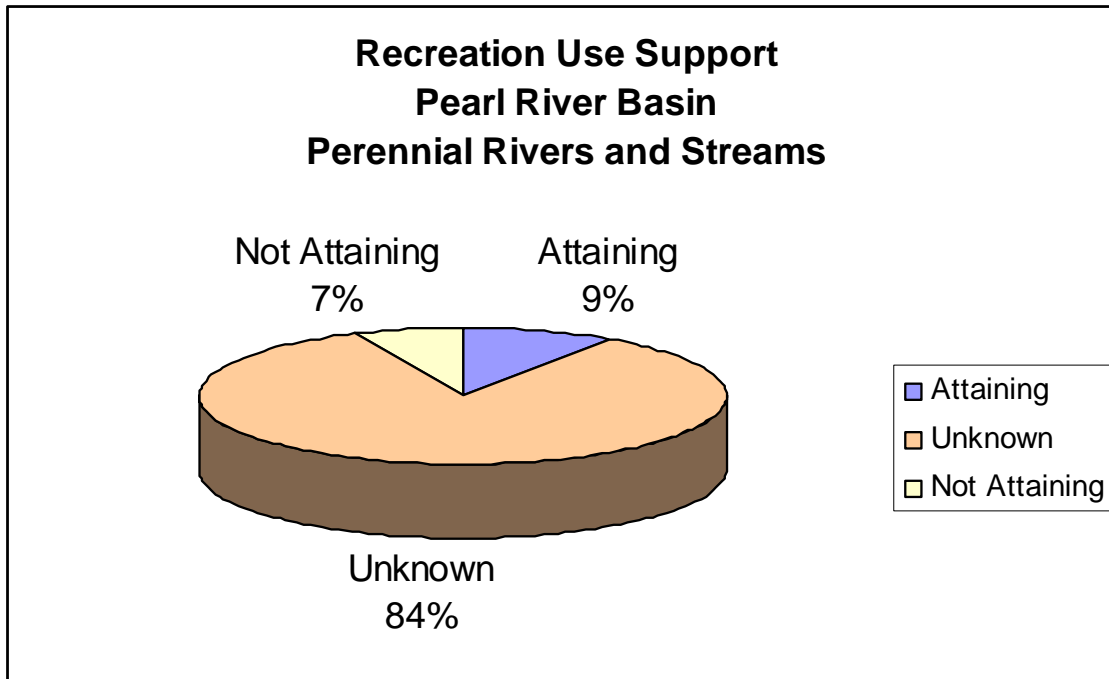


Figure 57: Recreation Use Support- Pearl River Basin

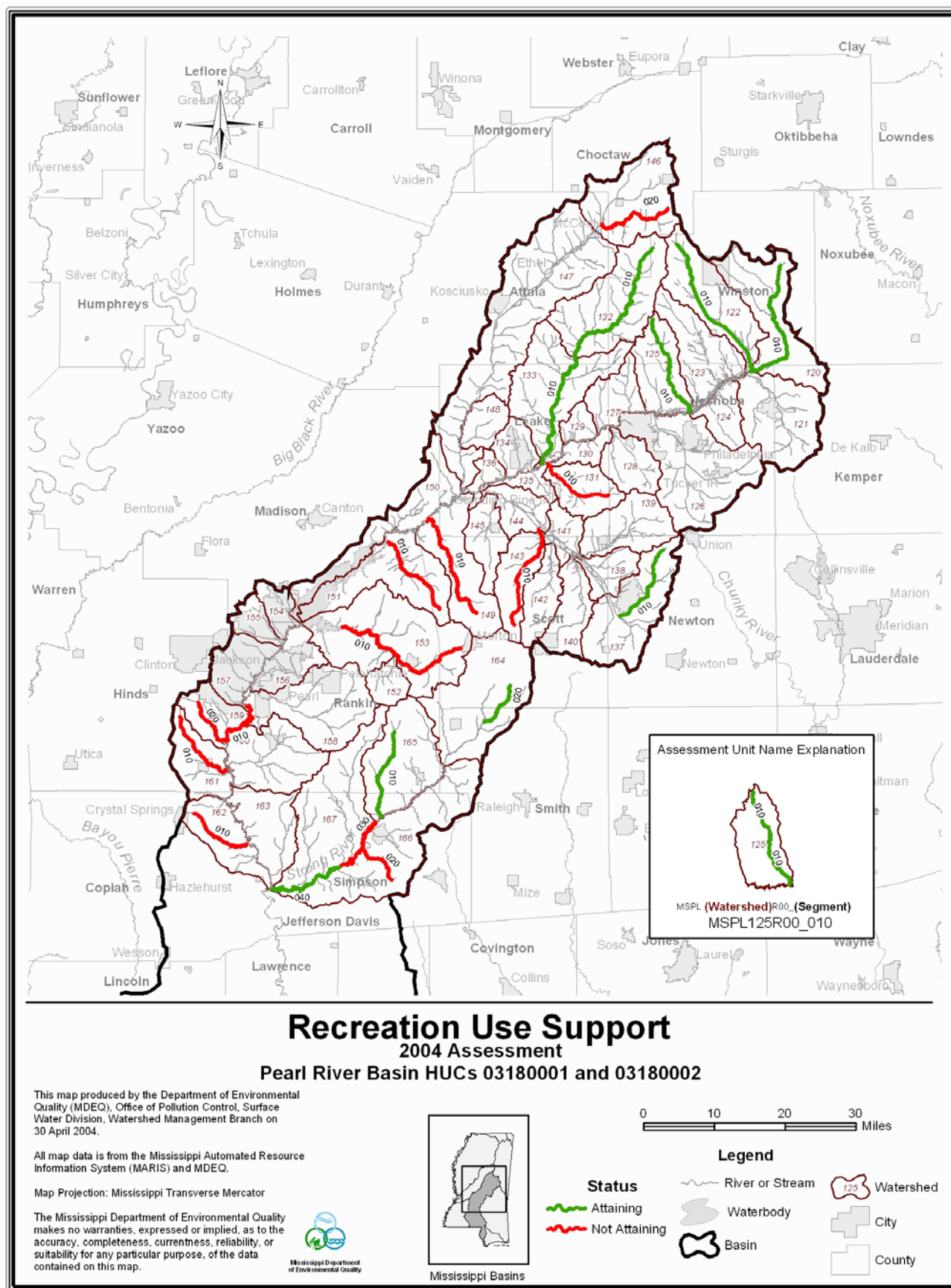


Figure 58: Recreation Use Support Map-Upper Pearl River Basin

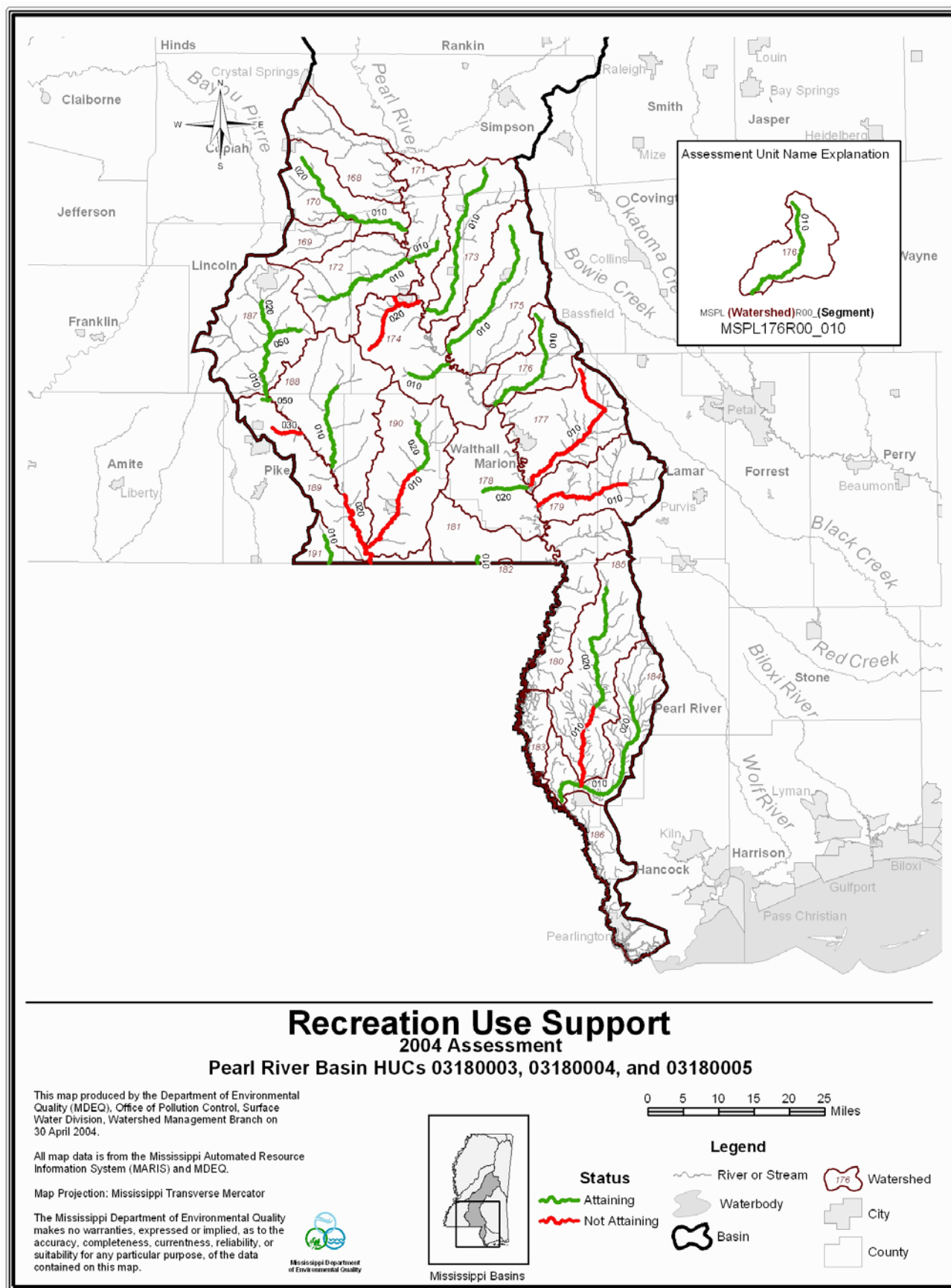


Figure 59: Recreation Use Support Map-Lower Pearl River Basin

Fish Consumption Use Support

Data collected and analyzed as part of MDEQ's fish tissue monitoring program and warranting fish tissue advisories were used to make the Fish Consumption Use Support assessments. Currently, there are five water bodies in the Pearl River Basin with fish tissue advisories. These waters are portions of Little Conehoma Creek, Yockanookany River, Bogue Chitto River, and Pearl River. Therefore, of the Pearl River Basin's assessed stream and river miles, approximately 123 miles of perennial rivers and streams are not attaining their fish consumption use and are considered impaired. These impairments are contributed to the presence of mercury and PCB's in fish tissue. TMDLs have been completed for these pollutants.

Table 25: 2004 §305(b) Assessed Water Bodies-Pearl River Basin

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BAHALA CREEK	MSPL170R00_010	N/A	Lawrence	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH LITTLE BAHALA CREEK TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
BAHALA CREEK	MSPL170R00_020	MS170B2E	Copiah, Lawrence, Lincoln	Secondary Contact	Attaining
LOCATION: NEAR TYRUS FROM HEADWATERS TO CONFLUENCE WITH LITTLE BAHALA CREEK					
BEAVER CREEK	MSPL189R00_050	N/A	Pike	Secondary Contact	Attaining
LOCATION: FROM HEADWATERS AT LAKE DIXIE SPRINGS DAM TO MOUTH AT BOGUE CHITTO RIVER					
BIG BRANCH	MSPL185R00_040	N/A	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT LITTLE HELL CREEK					
BIG CREEK	MSPL159R00_020	MS159E	Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BYRAM FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining, TMDL Completed
BIG CREEK	MSPL187R00_060	MS187BE1	Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT BOGUE CHITTO FROM CONFLUENCE WITH SASSERS MILL CREEK TO MOUTH AT BOGUE CHITTO RIVER					
BOGUE CHITTO RIVER	MSPL187R00_010	MSBGCHTRM 2	Lincoln, Pike	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE WITH BOONE CREEK TO JOHNSON'S STATION				Fish Consumption	Not Attaining, TMDL Completed
				Secondary Contact	Attaining
BOGUE CHITTO RIVER	MSPL187R00_020	MSBGCHTRM 1	Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ENTERPRISE FROM CONFLUENCE OF HALBERT BRANCH AND EAST BOGUE CHITTO TO CONFLUENCE WITH BOONE CREEK				Fish Consumption	Not Attaining, TMDL Completed
				Secondary Contact	Attaining

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PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BOGUE CHITTO RIVER	MSPL189R00_020	MSBGCHTRM 4	Walthall	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: NEAR LEHR FROM HEWY 48 TO LA STATE LINE				Primary Contact (Recr)	Not Attaining, TMDL Completed
BOGUE CHITTO RIVER	MSPL189R00_010	MSBGCHTRM 3	Pike, Walthall	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: AT HOLMESVILLE FROM JOHNSONS STATION TO HWY 48					
BOONE CREEK	MSPL187R00_050	MS187BE	Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BOGUE CHITTO FROM HEADWATERS TO MOUTH AT BOGUE CHITTO RIVER				Secondary Contact	Attaining
BRUSHY CREEK	MSPL162R00_010	MS162E	Copiah	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining, TMDL Completed
CAMPBELL CREEK	MSPL165R00_010	MS165CE	Rankin, Simpson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR D'LO FROM HEADWATERS TO MOUTH AT STRONG RIVER				Secondary Contact	Attaining
CANEY CREEK	MSPL164R00_020	N/A	Scott, Smith	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT STRONG RIVER				Secondary Contact	Attaining
CASCADE CREEK	MSPL171R00_030	N/A	Lawrence	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER					
CLABBER CREEK	MSPL189R00_040	MS189E	Pike	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO MOUTH AT BOGUE CHITTO RIVER					

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
CLEAR CREEK	MSPL180R00_010	MS180CE	Lamar, Marion	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SANDY HOOK FROM HEADWATERS TO MOUTH AT PEARL RIVER					
CLEAR CREEK	MSPL189R00_030	MS189R00_010	Pike	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BOGUE CHITTO RIVER				Secondary Contact	Not Attaining
COFFEE BOGUE CREEK	MSPL149R00_010	MS149E	Scott	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BRANCH FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining
CONEHATTA CREEK	MSPL137R00_010	MS137CE	Newton	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HAZEL FROM HEADWATERS TO MOUTH AT BIG CANAL				Secondary Contact	Attaining
CONEHOMA CREEK	MSPL147R00_020	MS147M2	Attala	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: NEAR KOSCIUSKO FROM HWY 35 TO MOUTH AT YOCKANOOKANY RIVER					
COPIAH CREEK	MSPL168R00_010	N/A	Copiah	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER					
DABBS CREEK	MSPL167R00_010	MS167DE	Rankin, Simpson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR D'LO FROM HEADWATERS TO MOUTH AT STRONG RIVER					
EAST BOGUE CHITTO RIVER	MSPL187R00_030	MSBGCHTRM1	Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH BOGUE CHITTO RIVER					

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
EAST HOBOLOCHITTO CREEK	MSPL184R00_020	MS184HE	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS AT JUNIPER CREEK TO CONFLUENCE WITH UNNAMED TRIB SOUTH OF ANCHOR LAKE				Secondary Contact	Attaining
EAST HOBOLOCHITTOE CREEK	MSPL184R00_010	MS184HE	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH UNNAMED TRIB SOUTH OF ANCHOR LAKE TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
EUTACUTACHEE CREEK	MSPL152R00_010	MS152E	Rankin	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PELAHATCHIE FROM HEADWATERS TO MOUTH AT PELAHATCHIE CREEK					
FAIR RIVER	MSPL172R00_010	MS172FE	Lawrence, Lincoln	Aquatic Life Support	Attaining
LOCATION: NEAR FERGUSON FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
FANNEGUSHA CREEK	MSPL151R00_010	MS151FE	Rankin, Scott	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BRANCH FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining
HALBERT BRANCH	MSPL187R00_040	MS187HE	Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BROOKHAVEN FROM HEADWATERS TO CONFLUENCE WITH EAST BOGUE CHITTO RIVER AT HEADWATERS OF BOGUE CHITTO RIVER					
HALLS CREEK	MSPL174R00_020	MSPL174R00_020	Lawrence	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining
HANGING MOSS CREEK	MSPL155R00_010	MS155E	Hinds, Rankin	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT JACKSON FROM HEADWATERS TO MOUTH AT PEARL RIVER					

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
HOLIDAY CREEK	MSPL176R00_010	MS176E	Jefferson Davis, Marion	Aquatic Life Support	Attaining
LOCATION: NEAR MORGANTOWN FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
HONTOKALO CREEK	MSPL140R00_010	N/A	Scott	Aquatic Life Support	Attaining
LOCATION: NEAR STEEL FROM HEADWATERS TO MOUTH AT LITTLE CANAL					
HUGHES CREEK	MSPL122R00_020	MS122E1	Winston	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT LOUISVILLE FROM HEADWATES TO COUNTY ROAD AT ESTES					
IRVING CREEK	MSPL171R00_020	N/A	Lawrence	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER					
JUNIPER CREEK	MSPL184R00_030	MS184JE	Pearl River	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MILLARD FROM HEADWATERS TO MOUTH AT EAST HOBOLOCHITTO CREEK					
KENTAWKA CREEK	MSPL126R00_010	N/A	Neshoba	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER					
LEATHERWOOD CREEK	MSPL188R00_020	N/A	Pike, Walthall	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BOGUE CHITTO RIVER					
LIMESTONE CREEK	MSPL163R00_010	N/A	Simpson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER					

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LITTLE BAHALA CREEK	MSPL169R00_010	N/A	Lawrence, Lincoln	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BIG BAHALA CREEK					
LITTLE HELL CREEK	MSPL185R00_030	N/A	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT WEST HOBOLOCHITTO CREEK					
LOBUTCHA CREEK	MSPL133R00_010	MS133L	Attala, Leake	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE OF UNNAMED TRIB UPSTREAM OF CONFLUENCE WITH PAILEY CREEK TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
LOBUTCHA CREEK	MSPL132R00_010	MS132E	Attala, Choctaw, Winston	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ZAMA FROM HEADWATERS TO CONFLUENCE WITH UNNAMED TRIB UPSTREAM OF CONFLUENCE WITH PAILEY CREEK				Secondary Contact	Attaining
LOWER LITTLE CREEK	MSPL179R00_010	MS179E	Lamar, Marion	Aquatic Life Support	Attaining
LOCATION: NEAR HUB FROM HEADWATERS AT HURRICANE CREEK TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining
LYNCH CREEK	MSPL157R00_010	MS157L	Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT JACKSON FROM HEADWATERS TO MOUTH AT PEARL RIVER					
MAGEES CREEK	MSPL190R00_020	N/A	Walthall	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH VARNELL CREEK				Secondary Contact	Attaining
MCGEES CREEK	MSPL190R00_010	MS190E	Walthall	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH VARNELL CREEK TO MOUTH AT BOGUE CHITTO RIVER				Primary Contact (Recr)	Not Attaining, TMDL Completed

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
MORAN CREEK	MSPL184R00_040	N/A	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT EAST HOBOLOCHITTO CREEK					
NANIH WAIYA CREEK	MSPL120R00_010	N/A	Neshoba, Winston	Secondary Contact	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER					
NOXAPATER CREEK	MSPL123R00_010	MS123NE	Neshoba, Winston	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STALLO FROM HEADWATERS TO MOUTH AT PEARL RIVER					
OWL CREEK	MSPL121R00_010	MS121O	Neshoba	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PRESTON FROM HEADWATERS TO MOUTH AT BOGUE CHITTO CREEK					
PEARL RIVER	MSPL150R00_010	MSUMPRLR2 M	Leake	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: NEAR PIGGTOWN FROM HWY 25 TO LEAKE COUNTY WATER PARK					
PEARL RIVER	MSPL159R00_010	MSUMPRLR1 M2	Hinds, Rankin	Primary Contact (Recr)	Not Attaining, TMDL Completed
LOCATION: NEAR BYRAM FROM JACKSON POTW OUTFALL TO CONFLUENCE WITH BIG CREEK					
PEARL RIVER	MSPL178R00_010	N/A	Marion	Primary Contact (Recr)	Attaining
LOCATION: FROM WATERSHED 178 BOUNDARY TO CONFLUENCE WITH HURRICAN CREEK AT WATERSHED 181 BOUNDARY					
PEGIES CREEK	MSPL168R00_020	N/A	Copiah	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER					

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
PELAHATCHIE CREEK	MSPL153R00_010	MS153PE	Rankin, Scott	Secondary Contact	Not Attaining
LOCATION: NEAR FANNIN FROM HEADWATERS AT MORTON CREEK TO ROSS BARNETT FLOOD POOL					
PINISHOOK CREEK	MSPL125R00_010	MS125PE	Neshoba, Winston	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BURNSIDE FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
PRETTY BRANCH	MSPL171R00_010	MS171PE	Lawrence	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
PUSHEPATAPA CREEK	MSPL181R00_010	MS181PE	Walthall	Aquatic Life Support	Attaining
LOCATION: NEAR STATE LINE FROM HEADWATERS TO LA STATE LINE				Secondary Contact	Attaining
RED CANE CREEK	MSPL151R00_020	MS151FM2	Rankin	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LEESBURG FROM HEADWATERS TO MOUTH AT FANNEGUSHA CREEK					
RHODES CREEK	MSPL161R00_010	MS161E	Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ROSEMARY FROM HEADWATERS TO THE PEARL RIVER				Secondary Contact	Not Attaining, TMDL Completed
RIALS CREEK	MSPL166R00_020	MS166RE	Simpson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT STRONG RIVER				Secondary Contact	Not Attaining, TMDL Completed
RICHLAND CREEK	MSPL158R00_010	MS158E	Rankin	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR RICHLAND FROM HEADWATERS TO MOUTH AT PEARL RIVER					

PEARL RIVER						
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS	
SHOCKALOO CREEK	MSPL143R00_010	MS143E	Leake, Scott	Aquatic Life Support	Not Attaining, Biological Impairment	
LOCATION: NEAR FOREST FROM HEADWATERS TO CONFLUENCE WITH LITTLE CANAL				Secondary Contact	Not Attaining	
SILVER CREEK	MSPL173R00_010	MS173E	Jefferson Davis, Lawrence, Simpson	Aquatic Life Support	Attaining	
LOCATION: NEAR MONTICELLO FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining	
SILVER CREEK	MSPL191R00_010	MS191SE	Pike	Aquatic Life Support	Not Attaining, Biological Impairment	
LOCATION: FROM HEADWATERS TO LA STATE LINE				Secondary Contact	Attaining	
SIPSEY CREEK	MSPL139R00_010	N/A	Neshoba, Newton, Scott	Aquatic Life Support	Attaining	
LOCATION: FROM HEADWATERS TO MOUTH AT BIG CANAL						
STANDING PINE CREEK	MSPL131R00_010	N/A	Leake	Aquatic Life Support	Attaining	
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining, TMDL Completed	
STEEN CREEK	MSPL160R00_010	N/A	Rankin	Aquatic Life Support	Attaining	
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER						
STRONG RIVER	MSPL164R00_010	MSSTRONGE	Smith	Aquatic Life Support	Not Attaining, Biological Impairment	
LOCATION: FROM HEADWATERS AT CANEY CREEK TO CONFLUENCE WITH PURVIS CREEK AT WATERSHED 164 BOUNDARY						
STRONG RIVER	MSPL166R00_040	N/A	Simpson	Primary Contact (Recr)	Attaining	
LOCATION: FROM CONFLUENCE WITH WESTVILLE CREEK TO MOUTH AT PEARL RIVER						

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
STRONG RIVER	MSPL166R00_030	MSPL166R00_030	Simpson	Primary Contact (Recr)	Not Attaining
LOCATION: FROM UNNAMED TRIB AT HWY 49 TO CONFLUENCE WITH WESTVILLE CREEK					
STRONG RIVER	MSPL166R00_010	MSSTRONGE	Rankin, Simpson, Smith	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE WITH PURVIS CREEK TO CONFLUENCE WITH CAMBELL CREEK					
SUGAR BOGUE	MSPL149R00_020	MS149S	Scott	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR FORKVILLE FROM HEADWATERS TO COFFEE BOGUE					
TALLABOGUE CREEK	MSPL142R00_010	MS142E1	Scott	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR FOREST FROM HEADWATERS TO CONFLUENCE WITH LITTLE CANAL					
TALLAHAGA CREEK	MSPL122R00_010	MS122E	Neshoba, Winston	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CLAYTOWN FROM HEADWATERS TO BIG SLOUGH				Secondary Contact	Attaining
TEN MILE CREEK	MSPL178R00_020	MS178TE	Marion	Aquatic Life Support	Attaining
LOCATION: NEAR CHERAW FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining
TIBBY CREEK	MSPL146R00_020	MS146TE	Attala, Choctaw	Aquatic Life Support	Attaining
LOCATION: NEAR MCCOOL FROM HEADWATERS TO MOUTH AT YOCKANOOKANY RIVER				Secondary Contact	Not Attaining
TILTON CREEK	MSPL174R00_010	MS174E	Lawrence, Marion	Aquatic Life Support	Attaining
LOCATION: NEAR TOLTON FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
TOPISAW CREEK	MSPL188R00_010	MS188TE	Lincoln, Pike	Aquatic Life Support	Attaining
LOCATION: NEAR HOLMESVILLE FROM HEADWATERS TO MOUTH AT BOGUE CHITTO RIVER				Secondary Contact	Attaining
TOWN CREEK	MSPL134R00_010	MS134T	Leake	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT CARTHAGE FROM HEADWATERS TO MOUTH AT PEARL RIVER					
TURTLE SKIN CREEK	MSPL186R00_010	MS186T	Hancock	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SANTA ROSA FROM HEADWATERS TO CONFLUENCE WITH MIKES RIVER					
TUSCOLAMETA CREEK	MSPL144R00_010	MS144E	Leake	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WALUNUT GROVE FROM CONFLUENCE OF BIG AND LITTLE CANAL TO MOUTH AT PEARL RIVER					
UPPER LITTLE CREEK	MSPL177R00_010	MS177E	Lamar, Marion	Aquatic Life Support	Attaining
LOCATION: NEAR LAMPTON FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Not Attaining
WEST HOBOLOCHITTO CREEK	MSPL185R00_010	MS185E1	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH KENNEDY CREEK TO CONFLUENCE WITH EAST HOBOLOCHITTO CREEK				Secondary Contact	Not Attaining
WEST HOBOLOCHITTO CREEK	MSPL185R00_020	N/A	Pearl River	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH KENNEDY CREEK				Secondary Contact	Attaining
WHITE SAND CREEK	MSPL175R00_010	MS175WE	Jefferson Davis, Lawrence	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT PEARL RIVER				Secondary Contact	Attaining

PEARL RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
WOLF CREEK	MSPL126R00_020	MS126E1	Neshoba	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PHILADELPHIA FROM HEADWATERS NORTH WEST OF FAIRVIEW TO MOUTH AT KENTAWKA CANAL					
YOCKANOOKANY RIVER	MSPL146R00_010	MS146YE	Attala, Choctaw	Aquatic Life Support	Attaining
LOCATION: NEAR MCCOOL FROM HEADWATERS TO WATERSHED 147 BOUNDARY				Fish Consumption	Not Attaining, TMDL Completed
YOCKANOOKANY RIVER	MSPL147R00_010	MS147M1	Attala, Leake	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: NEAR THOMASTOWN FROM HWY 35 AT KOSCIUSKO TO MOUTH AT PEARL RIVER					

SOUTH INDEPENDENT STREAMS BASIN

Basin Description

The South Independent Streams Basin is located in southwest Mississippi and consists of those streams which drain into the Mississippi River below the Big Black River and streams which drain into Louisiana, west of the Pearl River Basin. This 4,418 square miles area comprises all or part of 11 counties in southwestern Mississippi (Figure 60).



Major streams in the basin include the Homochitto River, Bayou Pierre, Tangipahoa River and the East and West Forks of the Amite River. For the MDEQ Basin Planning Approach and §305(b) assessment purposes, this basin also includes the Lower Mississippi River portion of the Mississippi River Basin below the city of Vicksburg.

Most of the region is made up of low, rolling hills and is largely forested. On the western side of the basin, high bluffs dominate the topography as the land meets the Mississippi River. The two largest urban areas in the basin are located on the Mississippi River. These river ports are the cities of Natchez and Vicksburg.

Figure 60: South Independent Streams Basin (MDEQ)

The population for the counties within the South Independent Streams Basin was estimated in 2000 at 439,933. There has been a 3% increase since 1990. The largest county populations are found in Adams, Warren, Pike, and Lincoln counties.

Land Use

The primary land use in the South Independent Streams Basin is forestry or silviculture. Amite County leads the state in forestry production and is 14th in the nation. The next principal land use in the South Independent Streams Basin is agriculture with some concentrated areas of industry around the cities of Natchez, Brookhaven, and McComb. A depiction of the major land cover in the basin is given in Figure 61.

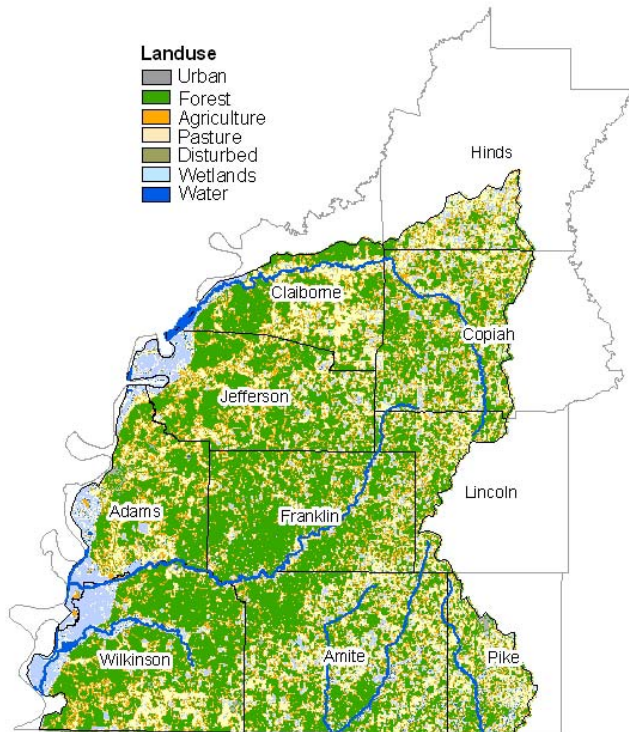
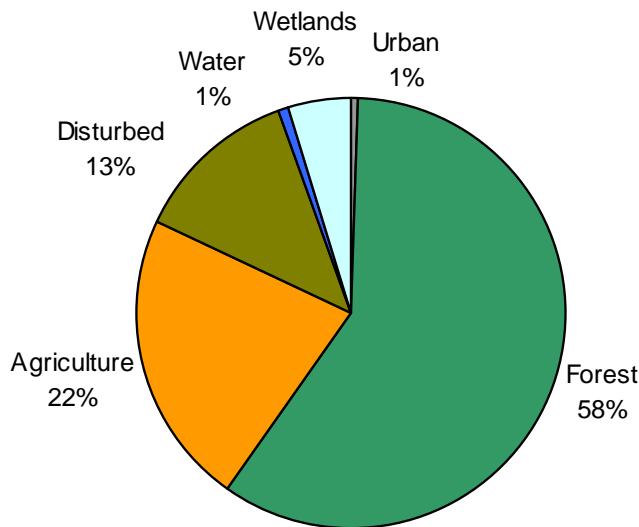


Figure 61: Major Land Cover in the South Independent Streams Basin (MARIS)

land cover is dominated by natural *Forest* (58%), which includes evergreen, deciduous and mixed-forested areas. *Agricultural* (pastures and croplands) areas comprise 22% of the land use in the basin.



In this basin, *Urban* areas make up only 1% of the land cover (Figure 62). Overall, *Disturbed areas* such as strip mines, gravel pits, sandy areas, barren, and transitional areas comprise 13% of the basin. *Water* sources, which include streams, lakes, reservoir and estuaries, and *Wetland*, which includes forested and nonforested wetlands comprise the remaining 15% of the basin.

Figure 62: Distribution of Land Cover in the South Independent Streams Basin (MARIS)

Water Resources

The South Independent Streams Basin has a total of 7,499 miles of perennial and intermittent rivers and streams. The majority of these water bodies are classified as Fish and Wildlife streams in the State's water quality standards with portions of several streams and rivers classified for Recreation. These include Bayou Pierre, Little Bayou Pierre, East Fork and West Fork of the Amite River, and Homochitto River. Most streams in the basin have good flow, clear water, and sandy bottoms. Near the Mississippi River, tributaries become flatter and are subject to the river's rise and fall which greatly affect the dynamics of these water bodies.

Several public reservoirs and lakes can be found in the South Independent Streams Basin. These include Lake Tangipahoa in Percy Quinn State Park near McComb, Natchez State Park Lake, and Lake Mary. Lake Tangipahoa (Percy Quinn State Park Lake) and Clear Springs Lake are classified for recreational use. The South Independent Streams Basin has five federally threatened and four federally endangered species. This basin also includes several water bodies proposed for review as potential Mississippi Natural and Scenic Waterways System water bodies: Bayou Pierre, Homochitto River, Tangipahoa River, Buffalo River and the East and West Forks of the Amite River.

Surface Water Assessment

Designated Use Support

The assessments for the South Independent Streams Basin were made based on data from 78 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project (M-BISQ) and the §303(d) fecal coliform

monitoring project (Figure 63). The perennial streams where the monitoring stations were located represented the mainstem drainage for each 11-digit watershed in the basin. Use support status for the basin is presented and summarized with causes and sources of impairment. No lake acreage was assessed in this report due to the lack of applicable lake monitoring data available for assessment in the basin during this reporting period and no fish tissue advisories are in effect for this basin.

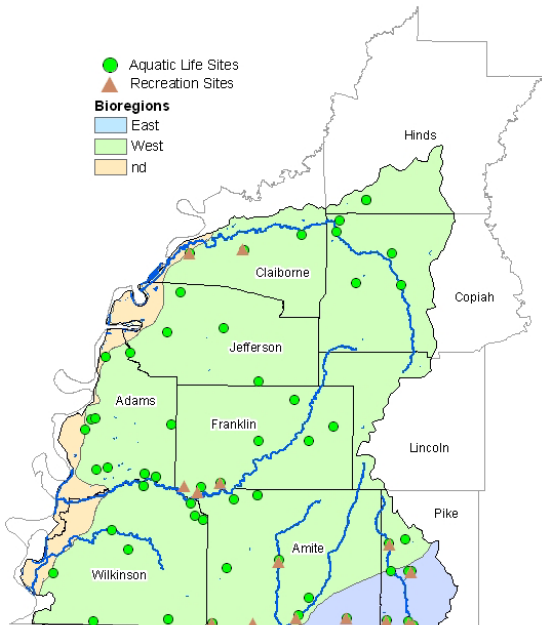


Figure 63: South Independent Streams Basin Monitoring Stations and M-BISQ Bioregions

MDEQ assessed approximately 15% (824 miles) of the total 5,347 perennial miles of streams and rivers in the South Independent Streams Basin. The status of water quality on the remaining 85% (4,523 miles) of the basin's perennial rivers and streams is unknown. A summary of use support for the basin's assessed rivers and streams is found in Table 26 and Figure 64. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

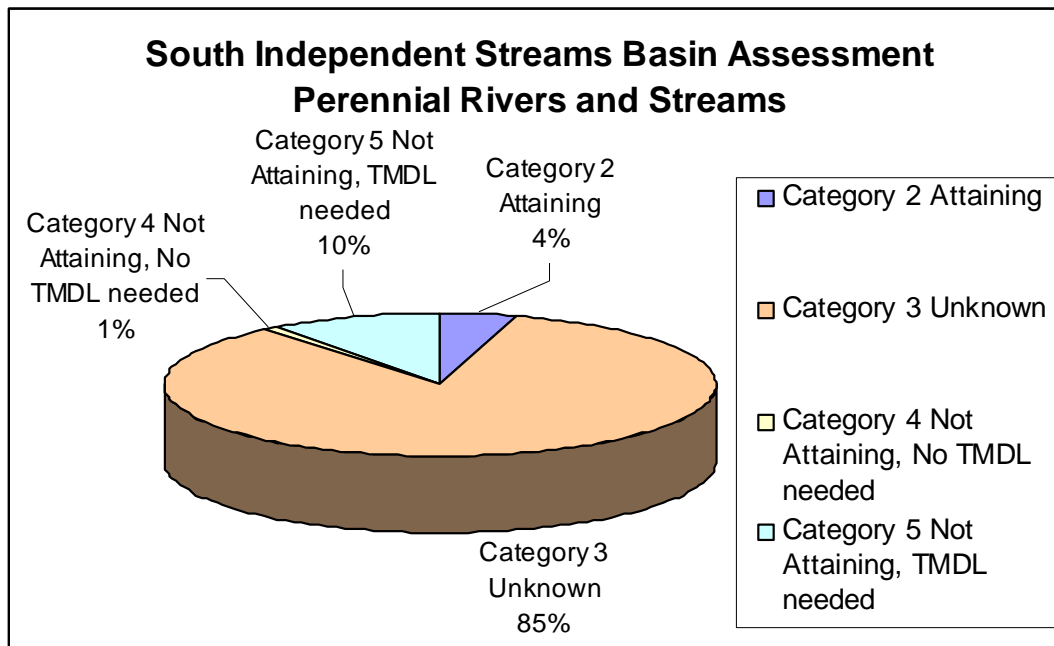
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the South Independent Streams Basin, approximately 4% are in category 2 for attaining some uses but unknown for remaining water body uses, and 1% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 10% of the assessed water bodies. The status of the remaining 85% of water bodies in the South Independent Streams Basin is unknown and these waters are reflected in category 3. Of the 537 miles of waters in category 5, 99% (530 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the South Independent Streams Basin section of the 2004 §303(d) list. Please refer to Table 30 at the end of the South Independent Streams Basin section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 26: Summary of South Independent Streams Basin Use Support Assessments- Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	234
Category 3: Unknown/Insufficient Data for Assessment	6,675
Intermittent Miles	4,523
Perennial Miles	2,152
Category 4: Not Attaining – No TMDL Needed	53
A. TMDL Completed	53
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	537
A. Pollutant Identified	7
B. Biological Impairment- Cause Unknown	530
Total Miles	7,499

**Figure 64: South Independent Streams Basin Assessment of Perennial Rivers and Streams**

Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were determined for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 27 and Figure 65. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. Other causes of impairment noted in the basin are from pathogens. For these impaired waters, the next step in the state's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process, where applicable, can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. The source of impairments for waters assessed in the South Independent Streams Basin is unknown. As stated above, the majority of impairment was determined to be biological and therefore sources of the impairment are yet to be determined.

Table 27: Summary of Impairment Causes-South Independent Streams Basin

Cause Categories	Total Miles
Biological Impairment*	
Pathogens	
Total	

* Note: Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

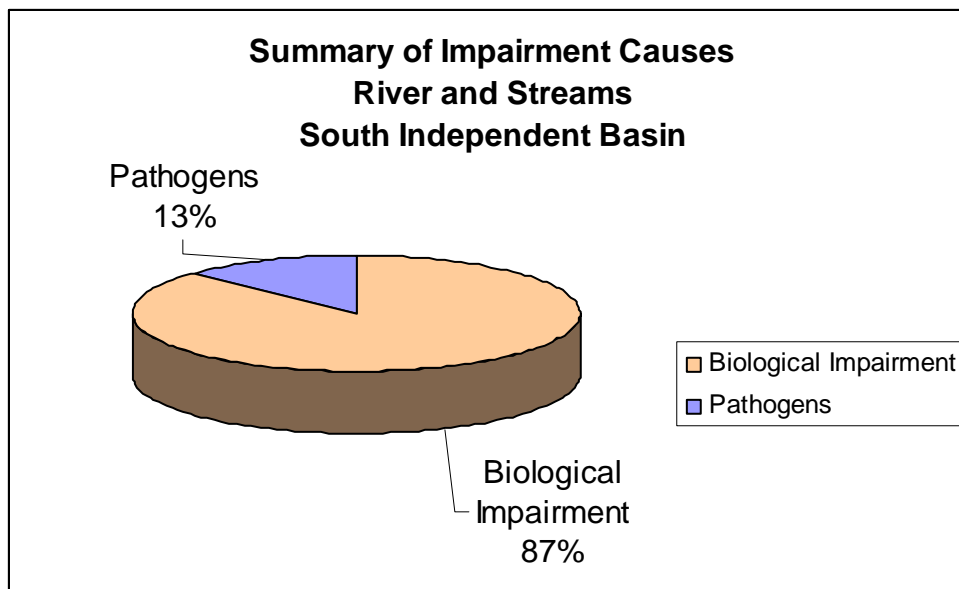


Figure 65: Summary of Impairment Causes for Perennial Rivers and Streams-South Independent Streams Basin

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the South Independent Streams Basin's assessed stream and river miles, approximately 251 miles of perennial rivers and streams are attaining their aquatic life use, while 530 miles were assessed as not attaining and are considered impaired (Table 28 and Figure 66). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figure 67 depicts a geo-referenced coverage of the Aquatic Life Use Support assessments for the South Independent Streams Basin.

Table 28: Aquatic Life Use Support-South Independent Streams Basin

Status	Miles
Attaining	251
Unknown	4,566
Total Not Attaining	530
TMDL needed	0
TMDL not needed	530
Total	5,347

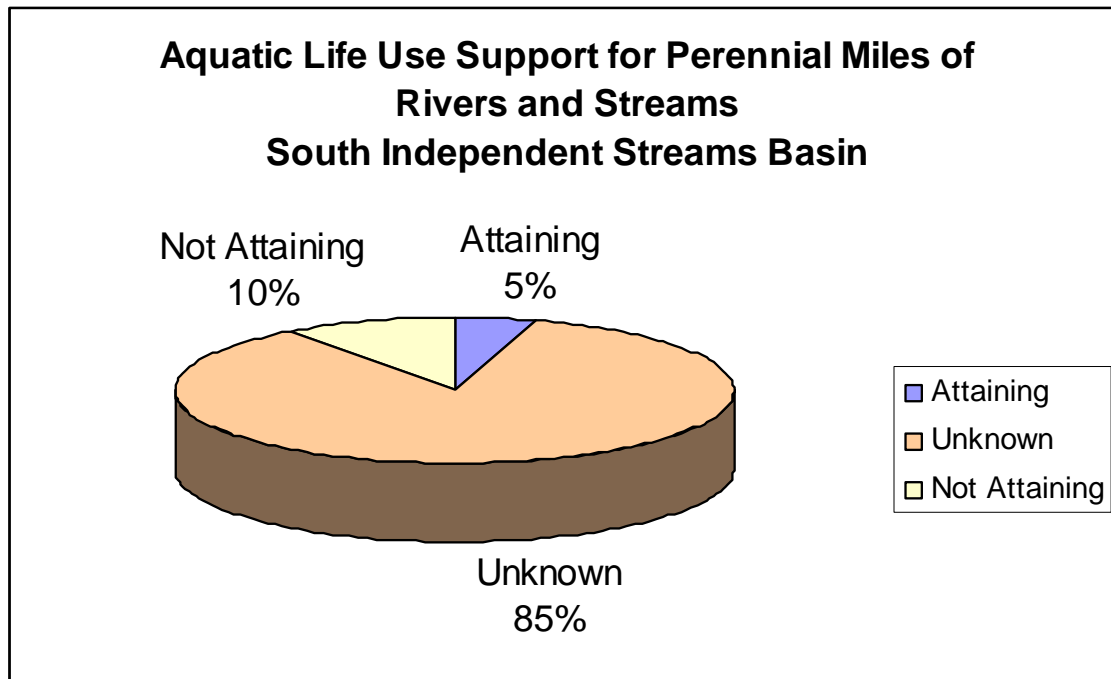


Figure 66: Aquatic Life Use Support-South Independent Streams Basin

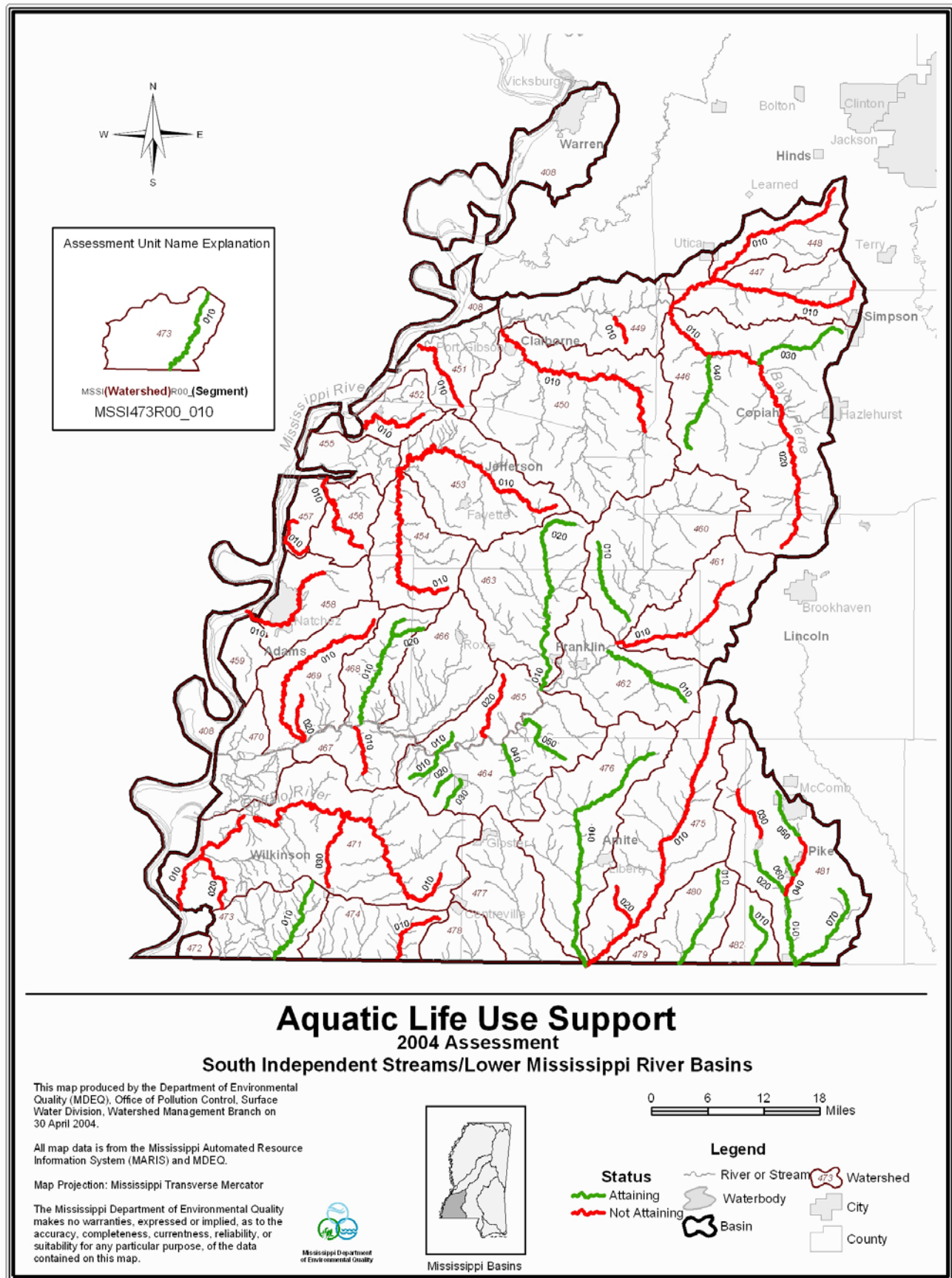


Figure 67: Aquatic Life Use Support Map-South Independent Streams Basin

Recreation Use Support

Data collected as part a statewide §303(d) fecal coliform monitoring project were used to make the Recreation Use Support assessments. Of the South Independent Streams Basin's assessed stream and river miles, approximately 216 miles of perennial rivers and streams are attaining their recreation use, while 78 miles were assessed as not attaining and are considered impaired (Table 29 and Figure 68). Figure 69 depicts a geo-referenced coverage of the Recreation Use Support assessments for the South Independent Streams Basin.

Table 29: Recreation Use Support-South Independent Streams Basin

Status	Miles
Attaining	216
Unknown	5,053
Total Not Attaining	78
TMDL needed	71
TMDL not needed	7
Total	5,347

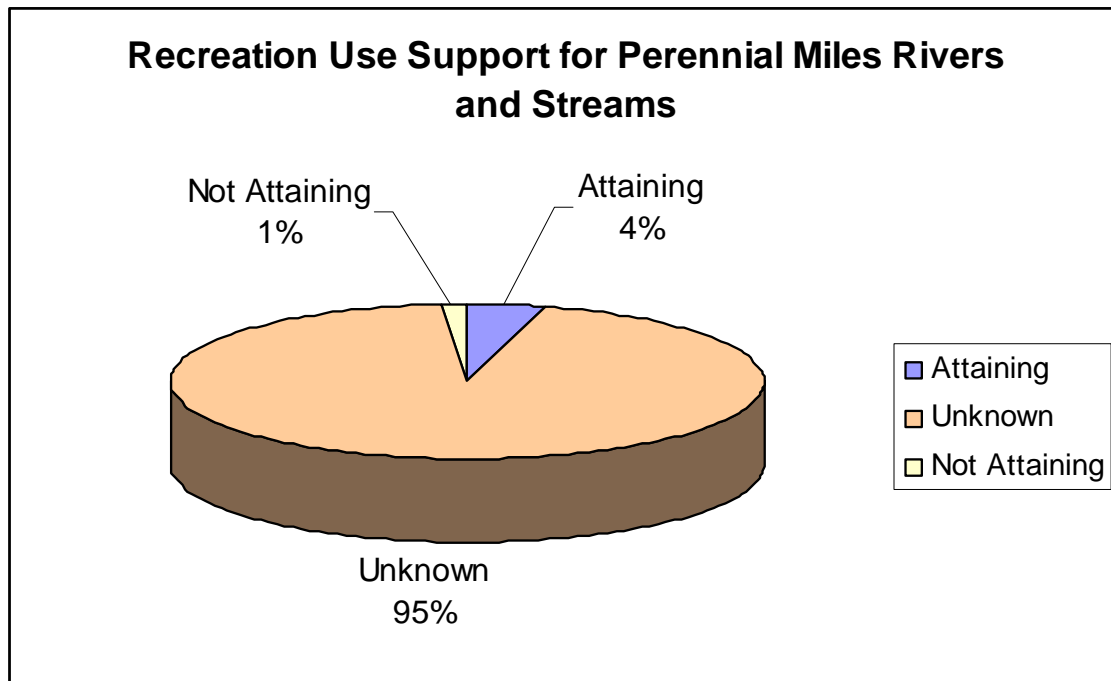


Figure 68: Recreation Use Support-South Independent Streams Basin

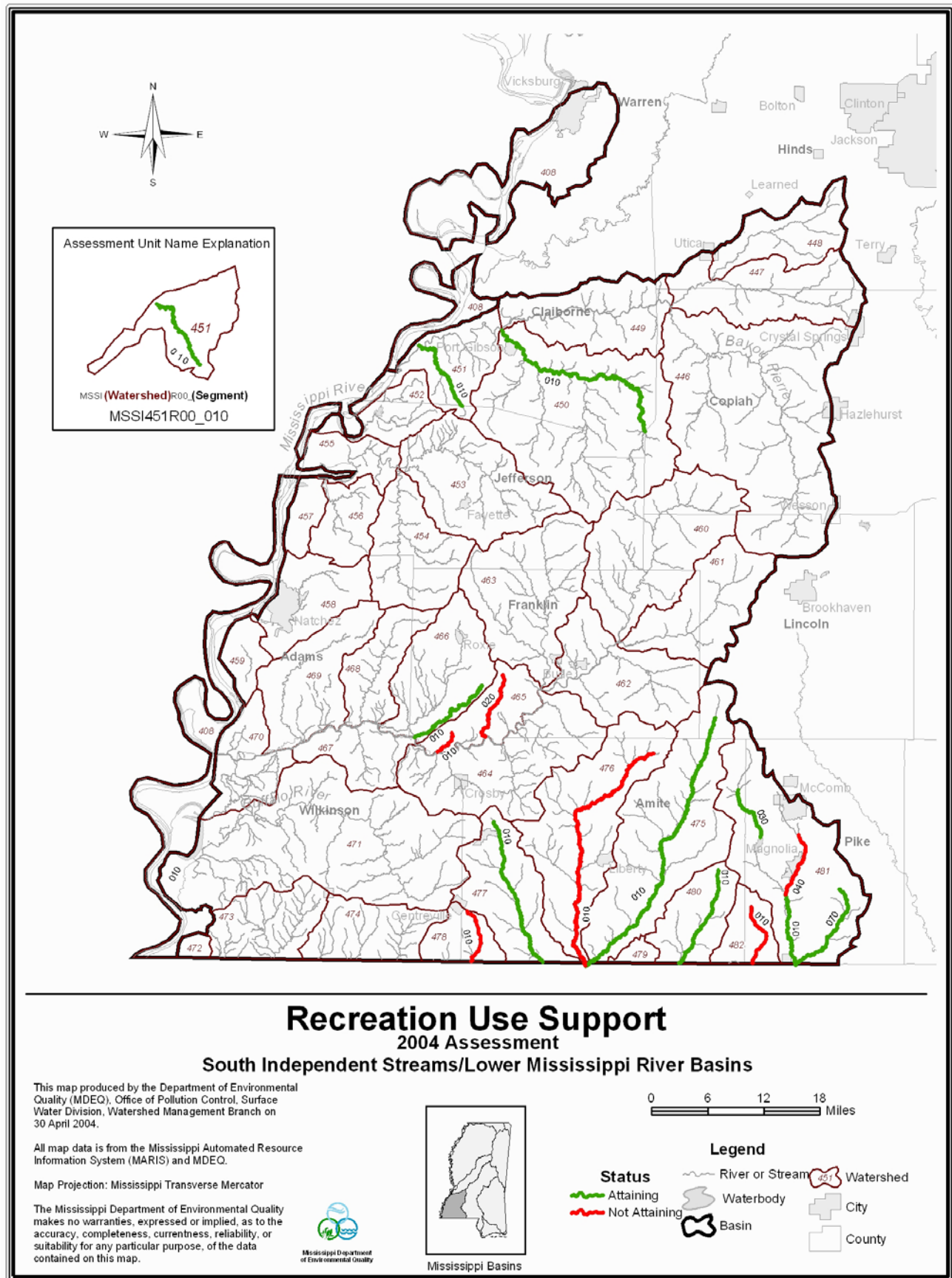


Figure 69: Recreation Use Support Map-South Independent Streams Basin

Table 30: 2004 §305(b) Assessed Water Bodies-South Independent Streams Basin

SOUTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
ANNAS BOTTOM	MSSI457R00_010	MS457E	Adams	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PINE RIDGE INTERMITTENT PART OF MISSISSIPPI RIVER FLOOD PLAIN					
BALA CHITTO CREEK	MSSI481R00_070	N/A	Pike	Aquatic Life Support	Attaining
LOCATION: AT OSYKA FROM HEADWATERS TO MOUTH AT TANGIPAHOA RIVER AT LA STATE LINE				Secondary Contact	Attaining
BATES CREEK	MSSI468R00_020	N/A	Adams, Franklin	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT SANDY CREEK					
BAYOU PIERRE	MSSI446R00_010	MS446BE	Copiah	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE WITH TURKEY CREEK TO CONFLUENCE WITH WHITE OAK CREEK					
BAYOU PIERRE	MSSI446R00_020	MS446BE	Copiah, Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH TURKEY CREEK					
BAYOU SARA	MSSI473R00_010	N/A	Wilkinson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO LA STATE LINE					
BEAVER CREEK	MSSI477R00_010	MS477E	Amite	Secondary Contact	Attaining
LOCATION: FROM HEADWATERS TO LA STATE LINE					
BRUSHY CREEK	MSSI464R00_040	N/A	Amite	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					

SOUTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BUFFALO RIVER	MSSI471R00_010	MS471BE	Wilkinson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WILKINSON FROM HEADWATERS TO MOUTH AT MISSISSIPPI RIVER					
CARS CREEK	MSSI475R00_020	MS475CM	Amite	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LIBERTY FROM HEADWATERS TO MOUTH AT EAST FORK AMITE RIVER					
CASTON CREEK	MSSI464R00_050	N/A	Amite, Franklin	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
COMITE CREEK	MSSI478R00_010	MS478E	Amite	Secondary Contact	Not Attaining
LOCATION: NEAR CENTREVILLE FROM HEADWATERS LA STATE LINE					
CROOKED CREEK	MSSI467R00_010	MS467E	Adams, Wilkinson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR DARRINGTON FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
CYPRESS CREEK	MSSI464R00_030	N/A	Wilkinson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT FOSTER CREEK					
DOWD CREEK	MSSI452R00_010	MS452E	Jefferson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR LORMAN FROM HEADWATERS TO MOUTH AT MISSISSIPPI RIVER					
DRY CREEK	MSSI464R00_010	N/A	Franklin, Wilkinson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					

SOUTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
DRY CREEK	MSSI466R00_010	N/A	Franklin, Wilkinson	Secondary Contact	Attaining
LOCATION: NEAR GARDEN CITY FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
EAST FORK AMITE RIVER	MSSI475R00_010	MS475E	Amite, Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
				Primary Contact (Recr)	Attaining
LOCATION: NEAR PEORIA FROM HEADWATERS TO LA STATE LINE					
FAIRCHILDS CREEK	MSSI456R00_010	MS456E	Adams, Jefferson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CHURCH HILL FROM HEADWATERS TO MOUTH AT COLES CREEK					
FIFTEEN MILE CREEK	MSSI460R00_010	N/A	Franklin, Jefferson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
FORDS CREEK	MSSI471R00_030	MS471FE	Wilkinson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WOODVILLE FROM HEADWATERS TO MOUTH AT BUFFALO RIVER					
FOSTER CREEK	MSSI446R00_040	N/A	Copiah	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BAYOU PIERRE					
JAMES CREEK	MSSI451R00_010	MS451JE	Claiborne, Jefferson	Aquatic Life Support	Not Attaining, Biological Impairment
				Secondary Contact	Attaining
LOCATION: NEAR LORMAN FROM HEADWATERS TO MOUTH AT BAYOU PIERRE					
LITTLE BAYOU PIERRE	MSSI450R00_010	MS450E	Claiborne	Aquatic Life Support	Not Attaining, Biological Impairment
				Primary Contact (Recr)	Attaining
LOCATION: NEAR PORT GIBSON FROM HEADWATERS TO MOUTH AT BAYOU PIERRE					

SOUTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LITTLE TANGIPAHOA RIVER	MSSI481R00_040	MS481M5	Pike	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR FERNWOOD FROM CONFLUENCE WITH TOWN CREEK TO MOUTH AT TANGIPAHOA RIVER				Secondary Contact	Not Attaining, TMDL Completed
LITTLE TANGIPAHOA RIVER	MSSI481R00_050	N/A	Pike	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH TOWN CREEK					
MCCALL CREEK	MSSI461R00_010	MS461E	Franklin, Lincoln	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VAUGHN FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
MCGEEHEE CREEK	MSSI462R00_010	N/A	Franklin	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
MIDDLE FORK CREEK	MSSI463R00_010	N/A	Franklin	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH CAMERON CREEK TO MOUTH AT HOMOCHITTO RIVER					
MIDDLE FORK CREEK	MSSI463R00_020	N/A	Franklin, Jefferson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH CAMERON CREEK					
MILLBROOK CREEK	MSSI471R00_020	MS471MM	Wilkinson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR POND FROM HEADWATERS TO MOUTH AT BUFFALO RIVER					
MINNEHAHA CREEK	MSSI481R00_060	N/A	Pike	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT LITTLE TANGIPAHOA RIVER					

SOUTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
NORTH FORK COLES CREEK	MSSI453R00_010	MS453E	Jefferson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CHURCH HILL FROM HEADWATERS TO CONFLUENCE WITH SOUTH FORK COLES CREEK					
RICHARDSON CREEK	MSSI465R00_020	MS465RE	Franklin	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER				Secondary Contact	Not Attaining, TMDL Completed
SANDY CREEK	MSSI468R00_010	N/A	Adams	Aquatic Life Support	Attaining
LOCATION: NEAR KINGSTON FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
SECOND CREEK	MSSI469R00_010	MS469SE	Adams, Wilkinson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR DOLOROSO FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER					
SOUTH FORK COLES CREEK	MSSI454R00_010	MS454E	Adams, Franklin, Jefferson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HAMBURG FROM HEADWATERS TO MOUTH AT COLES CREEK					
ST. CATHERINES CREEK	MSSI458R00_010	MS458SCCM	Adams	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT NATCHEZ FROM HEADWATERS TO MOUTH AT MS RIVER					
STORM CREEK	MSSI449R00_010	MS449SM	Claiborne	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CARLISLE FROM HEADWATERS TO MOUTH AT BAYOU PIERRE					
TALLAHALA CREEK	MSSI448R00_010	MS448E	Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ADAMS FROM HEADWATERS TO MOUTH AT WHITE OAK CREEK					

SOUTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
TANGIPAHOA RIVER	MSSI481R00_010	N/A	Pike	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH LITTLE TANGIPAHOA RIVER TO LA STATE LINE				Secondary Contact	Attaining
TANGIPAHOA RIVER	MSSI481R00_020	N/A	Pike	Aquatic Life Support	Attaining
LOCATION: FROM LAKE TANGIPAHOA DAM TO CONFLUENCE WITH LITTLE TANGIPAHOA RIVER					
TANGIPAHOA RIVER	MSSI481R00_030	MS481M2	Amite, Pike	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MCCOMB FROM CONFLUENCE WITH DEVINE CREEK TO LAKE TANGIPAHOA				Secondary Contact	Attaining
TAR CREEK	MSSI464R00_020	N/A	Wilkinson	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT FOSTER CREEK					
TERRYS CREEK	MSSI482R00_010	MS482M	Pike	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO LA STATE LINE				Secondary Contact	Not Attaining, TMDL Completed
THOMPSON CREEK	MSSI474R00_010	MS474E	Wilkinson	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CENTREVILLE FROM HEADWATERS TO LA STATE LINE					
TICFAW RIVER	MSSI480R00_010	MS480E	Amite	Aquatic Life Support	Attaining
LOCATION: NEAR MIXON FROM HEADWATERS TO LA STATE LINE				Secondary Contact	Attaining
TURKEY CREEK	MSSI446R00_030	N/A	Copiah	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BAYOU PIERRE					

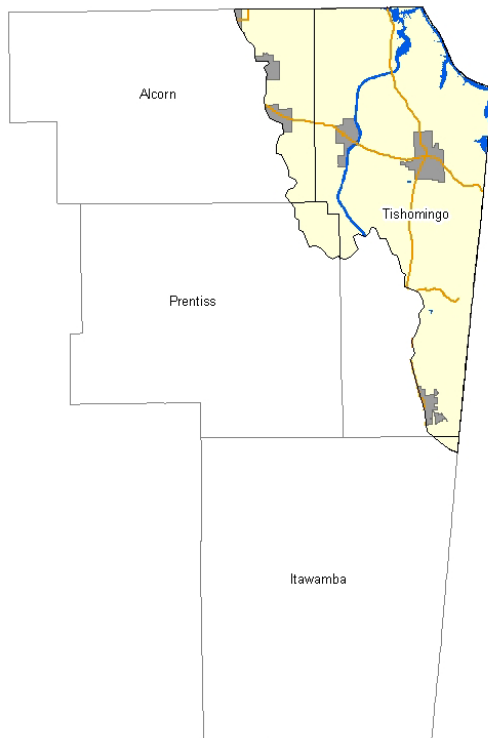
SOUTH INDEPENDENT STREAMS					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
WEST FORK AMITE RIVER	MSSI476R00_010	N/A	Amite	Aquatic Life Support	Attaining
				Primary Contact (Recr)	Not Attaining, TMDL Completed
				LOCATION: NEAR LIBERTY FROM HEADWATERS TO LA STATE LINE	
WHITE OAK CREEK	MSSI447R00_010	MS447E	Copiah, Hinds	Aquatic Life Support	Not Attaining, Biological Impairment
				LOCATION: NEAR CRYSTAL SPRINGS FROM HEADWATERS TO MOUTH AT BAYOU PIERRE	
WHITES CREEK	MSSI469R00_020	MS469WE	Adams, Wilkinson	Aquatic Life Support	Not Attaining, Biological Impairment
				LOCATION: NEAR DOLOROSO FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER	
ZEIGLER CREEK	MSSI465R00_010	MS465ZE	Franklin, Wilkinson	Aquatic Life Support	Attaining
				Secondary Contact	Not Attaining, TMDL Completed
				LOCATION: FROM HEADWATERS TO MOUTH AT HOMOCHITTO RIVER	

TENNESSEE RIVER BASIN

Basin Description

The Tennessee River Basin covers an area of approximately 417 square miles in the northeast corner of the state of Mississippi. The Mississippi portion of the Tennessee River Basin incorporates six 11 digit HUC watersheds. The basin is composed of Pickwick Lake, a small portion of the Tennessee River, a portion of Bear Creek, which flows into and from Alabama, and the Yellow Creek segment of the Tennessee-Tombigbee Waterway (TTW). Other smaller water bodies in this basin include Indian Creek, Cripple Deer Creek, and Little Cripple Deer Creek. Pickwick Lake is the most significant hydrologic feature in the basin in Mississippi. Pickwick, one of a chain of lakes formed by dams built along the Tennessee River in the 1930s, has 47,500 square acres, most of which is located in Tennessee and Alabama. Pickwick Lake is one of several reservoirs managed by the Tennessee Valley Authority (TVA).

The Mississippi portion of the Tennessee River Basin lies within the Fall Line Hills of the East Gulf Coastal Plain. The Fall Line Hills lie partially in the foothills of the



Appalachian Mountains. The topography of the basin is mostly gently rolling hills, sharp ridges and broad alluvial floodplains over rocks of sedimentary origin. The soil types range from loams to clays. Changes in average elevation range from 100 to 300 feet; however, Woodall Mountain, the highest point in Mississippi at 806 feet, is located in the basin. Portions of the landscape in Tishomingo County, Mississippi, specifically in Tishomingo State Park are characterized by massive rock formations and fern-filled crevices. Massive boulders blanketed in moss are found throughout the hillsides. The only major urban population center and industrial area for this small basin is found around the city of Iuka.

Figure 70: Tennessee River Basin (MDEQ)

The Tennessee River Basin encompasses parts of four counties: Alcorn, Itawamba, Prentiss and Tishomingo in Mississippi. However, one of these counties, Itawamba has only a very small portion of their total area (less than 1%) in the basin. The basin is sparsely populated with less than 30,000 persons inhabiting the area. According to the 2000 census, approximately 27,630 people live in the Tennessee River Basin within Mississippi's boundaries.

Land Use

A depiction of the land uses in the basin is given in Figure 71. *Forests* cover approximately 49% of the total land area of the Tennessee River Basin in Mississippi (Figure 72). The basin is home to the Tishomingo State Park and J. P. Coleman State Park as well as the TTW Divide Section Wildlife Management Area. *Agricultural* areas including pasture, rangelands and croplands comprise approximately 31% of the basin's total land area. In Mississippi, the Tennessee River Basin has approximately 989 acres of *wetlands* (less than 1% of the basin land area) with about 803 acres being bottomland hardwood forests. *Urban* areas account for 2% of the land use in the Basin. *Water* (fresh and aquaculture) account for 3% of the land cover with the remaining land cover classified as barren (approximately 15%).

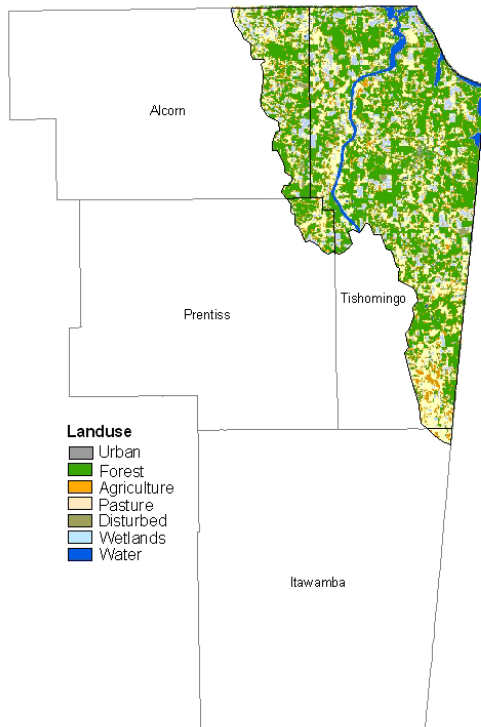


Figure 71: Major Land Use in the Tennessee River Basin (MARIS)

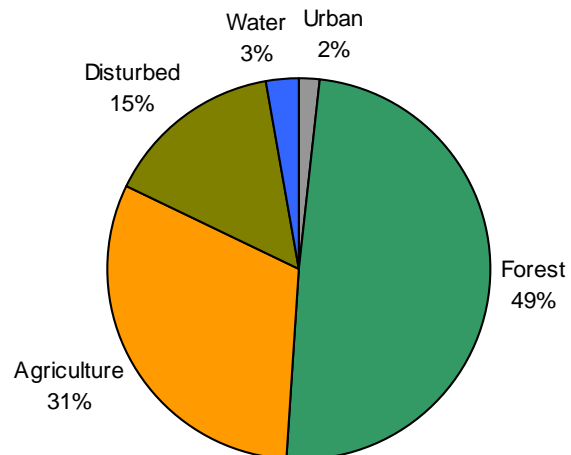


Figure 72: Distribution of Land Cover in the Tennessee River Basin (MARIS)

Water Resources

The Tennessee River Basin in Mississippi has a total of 646 miles of perennial and intermittent rivers and streams. According to the State's water quality standards (WQS), most of the basin's water bodies are classified for Fish and Wildlife. In addition to the Fish and Wildlife Classification, one water body, Tennessee River, is additionally classified for Public Water Supply (PWS) in the basin. However, this classification is only due to the assignment of this same classification to the adjacent state of Tennessee portion of the river rather than actual PWS use of the river by residents of Mississippi. In addition to the Tennessee River, this basin also includes the northernmost end of the TTW. Known as the Divide Section of the TTW, this reach of the TTW near Burnsville connects Bay Springs Lake and the rest of the TTW in Mississippi and Alabama to Pickwick Lake (a portion of the Tennessee River) through the Yellow Creek Embayment.

Streams in the basin are generally fast flowing and clear with gravel, sand, and rock bottoms. Due to the higher elevations in this part of the state, some of the streams are spring-fed and have cold water year-round. Significant streams in this basin include Indian Creek, Little Yellow Creek, Cripple Deer Creek, Little Cripple Deer Creek, Bear Creek and Cedar Creek.

The predominant surface water feature in the Tennessee River Basin is Pickwick Lake. This lake, also, known as Pickwick Reservoir, is managed by the Tennessee Valley Authority (TVA). Pickwick Lake consists of 47,500 acres of fresh water, a large portion of which runs through the J. P. Coleman State Park in Tishomingo County, Mississippi. Pickwick Lake (Tennessee River) from the MS-TN State Line to the AL-MS State Line is classified as Public Water Supply. In addition to this mainstem run, Pickwick Lake in Mississippi is also characterized by three large embayments. Yellow Creek Embayment lies to the east and through this water body, the Yellow Creek portion of the TTW connects to the Tennessee River. The other two embayments include Indian Creek Embayment found off the central portion of the lake near J.P. Coleman State Park, and Bear Creek Embayment along the MS-AL state line.

In terms of biological features, the Tennessee River and its tributaries are home to the highest number of fish, mussels and crayfish species, and endemic freshwater fauna in North America. The mussel fauna contained in the Tennessee River System has been found to be one of the most diverse in the world. However, the Tennessee River Basin in Mississippi, due to a series of dams and impoundments has experienced a steady decline in the diversity of its fauna. Reduced mussel species and altered species composition as well as a loss of host fish population characterize this decline. Currently, according to the Geological Survey of Alabama, the most diverse mussel community in the system is found downstream of Bear Creek Dam to the part of Bear Creek impounded as part of Pickwick Reservoir. In this area, 27 mussel species have been identified. Bear Creek and Pickwick Lake are abundant in their populations of smallmouth, largemouth and spotted bass, white crappie and sauger. The Tennessee River Basin in Mississippi has 1 federally threatened and 2 federally endangered species of wildlife. This basin also

includes one water body, Bear Creek, proposed for review as a potential Mississippi Natural and Scenic Waterways System water body.

Surface Water Assessment

Designated Use Support

The assessments for the Tennessee River Basin were made based on data from 15 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI Wadeable Streams Project (M-BISQ) and the §303(d) fecal coliform monitoring project (Figure 73). The perennial streams where the monitoring stations were located represented the mainstem drainage for each 11-digit watershed in the basin. Use support status for the basin is presented and summarized with causes and sources of impairment. No lake acreage was assessed in this report due to the lack of applicable lake monitoring data available for assessment in the basin during this reporting period and no fish tissue advisories are in effect for this basin.

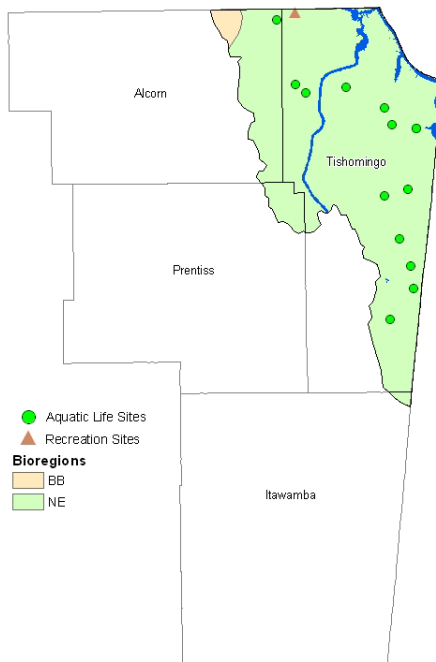


Figure 73: Tennessee River Basin Monitoring Stations and M-BISQ Bioregions

MDEQ assessed approximately 30% (64 miles) of the total 212 perennial miles of streams and rivers in the Tennessee River Basin. The status of water quality on the remaining 70% (148 miles) of the basin's perennial rivers and streams is unknown. A summary of use support for the basin's assessed rivers and streams is found in Table 31 and Figure 74. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the Tennessee River Basin, approximately 13% are in category 2 for attaining some uses but unknown for remaining water body uses. There are no water bodies in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 17% of the assessed water bodies. The status of the remaining 70% of water bodies in the Tennessee River Basin is unknown and these waters are reflected in category 3. Of the 36 miles of waters in category 5, 78% (28 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the Tennessee River Basin section of the 2004 §303(d) list. Please refer to Table 35 at the end of this section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 31: Summary of Tennessee River Basin Use Support Assessments-Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	28
Category 3: Unknown/Insufficient Data for Assessment	582
Intermittent Miles	434
Perennial Miles	148
Category 4: Not Attaining – No TMDL Needed	0
A. TMDL Completed	0
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	36
A. Pollutant Identified	8
B. Biological Impairment- Cause Unknown	28
Total Miles	646

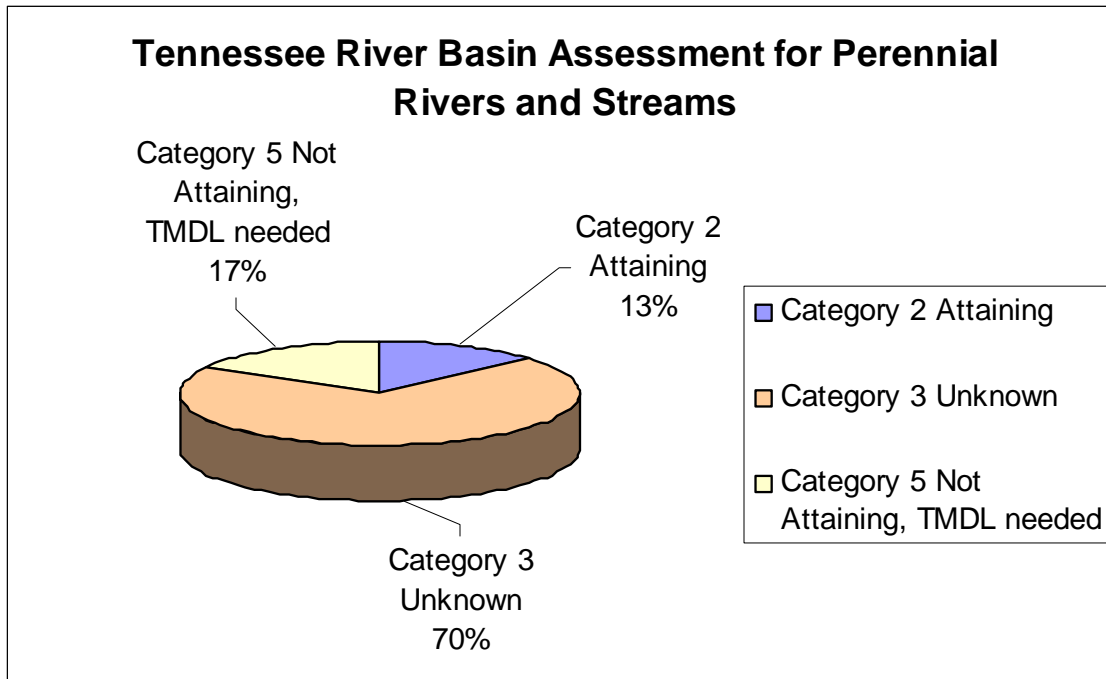


Figure 74: Tennessee River Basin Assessment of Perennial Rivers and Streams

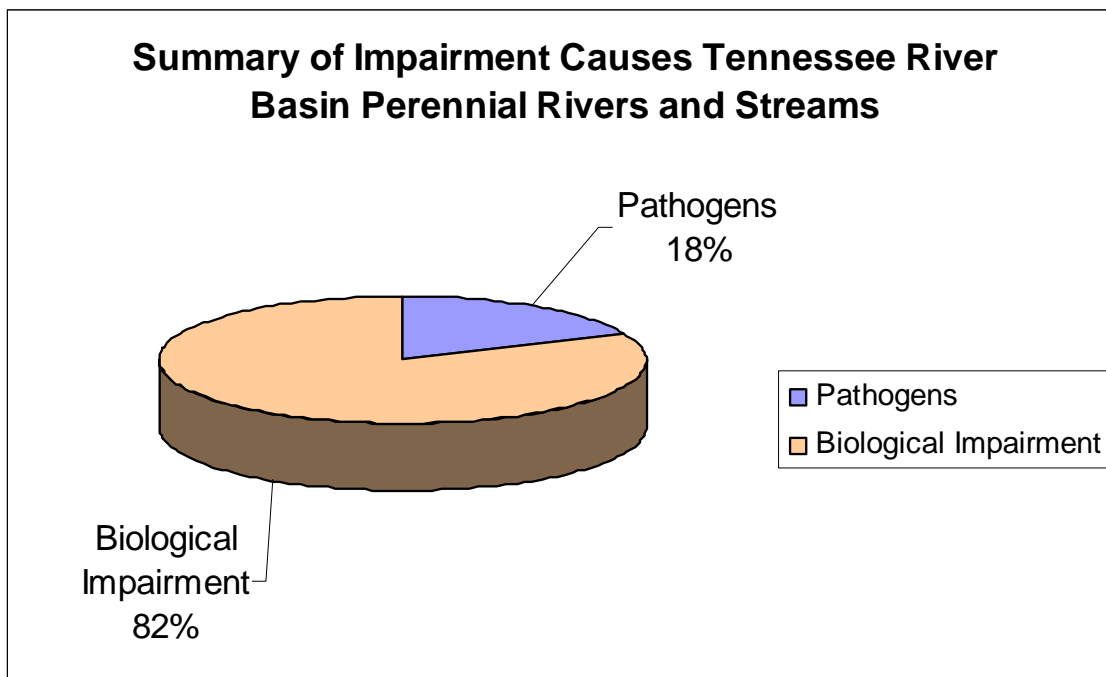
Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were evaluated for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 32 and Figure 75. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. Other causes of impairment noted in the basin are from pathogens. For these impaired waters, the next step in the State's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. The source of impairments for waters assessed in the Tennessee River Basin is unknown. As above, the majority of impairment was determined to be biological and therefore sources of the impairment are yet to be determined.

Table 32: Summary of Impairment Causes-Tennessee River Basin

Cause Categories	Total Miles
Biological Impairment*	36
Pathogens	8
Total	44

* Note: Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

**Figure 75: Summary of Impairment Causes for Perennial Rivers and Streams-Tennessee River Basin**

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the Tennessee River Basin's assessed stream and river miles, approximately 28 miles of perennial rivers and streams are attaining their aquatic life use, while 36 miles were assessed as not attaining and are considered impaired (Table 33 and Figure 76). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figure 77 depicts a geo-referenced coverage of the Aquatic Life Use Support assessments for the Tennessee River Basin.

Table 33: Aquatic Life Use Support-Tennessee River Basin

Status	Miles
Attaining	28
Unknown	148
Total Not Attaining	36
TMDL not needed	0
TMDL needed	36
Total	212

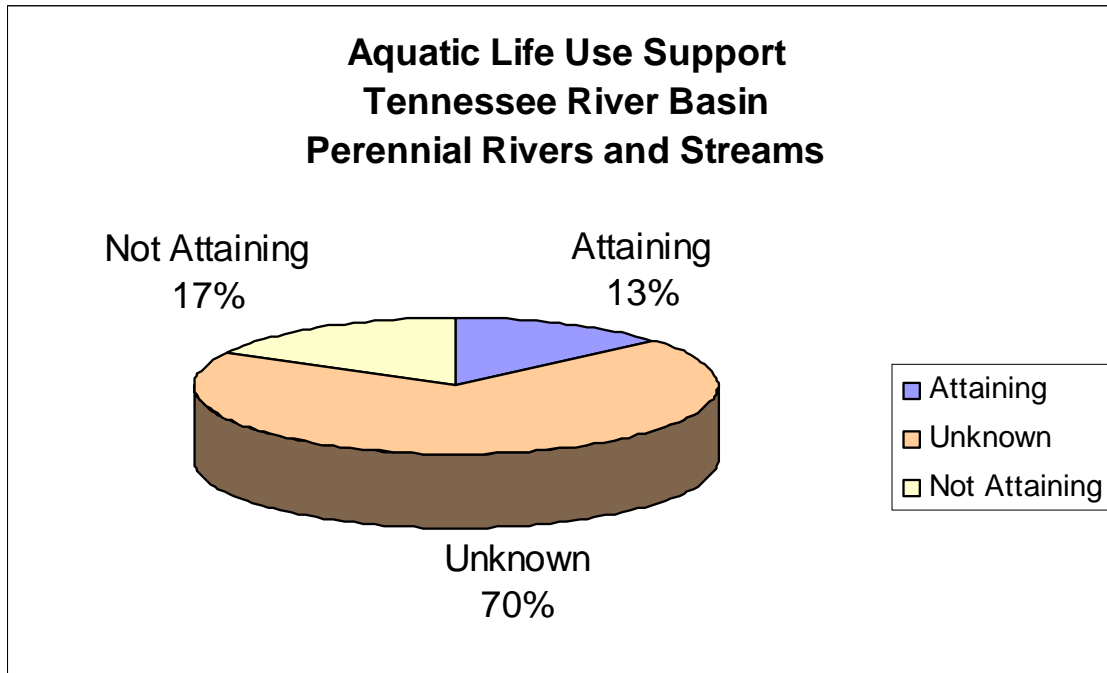


Figure 76: Aquatic Life Use Support-Tennessee River Basin

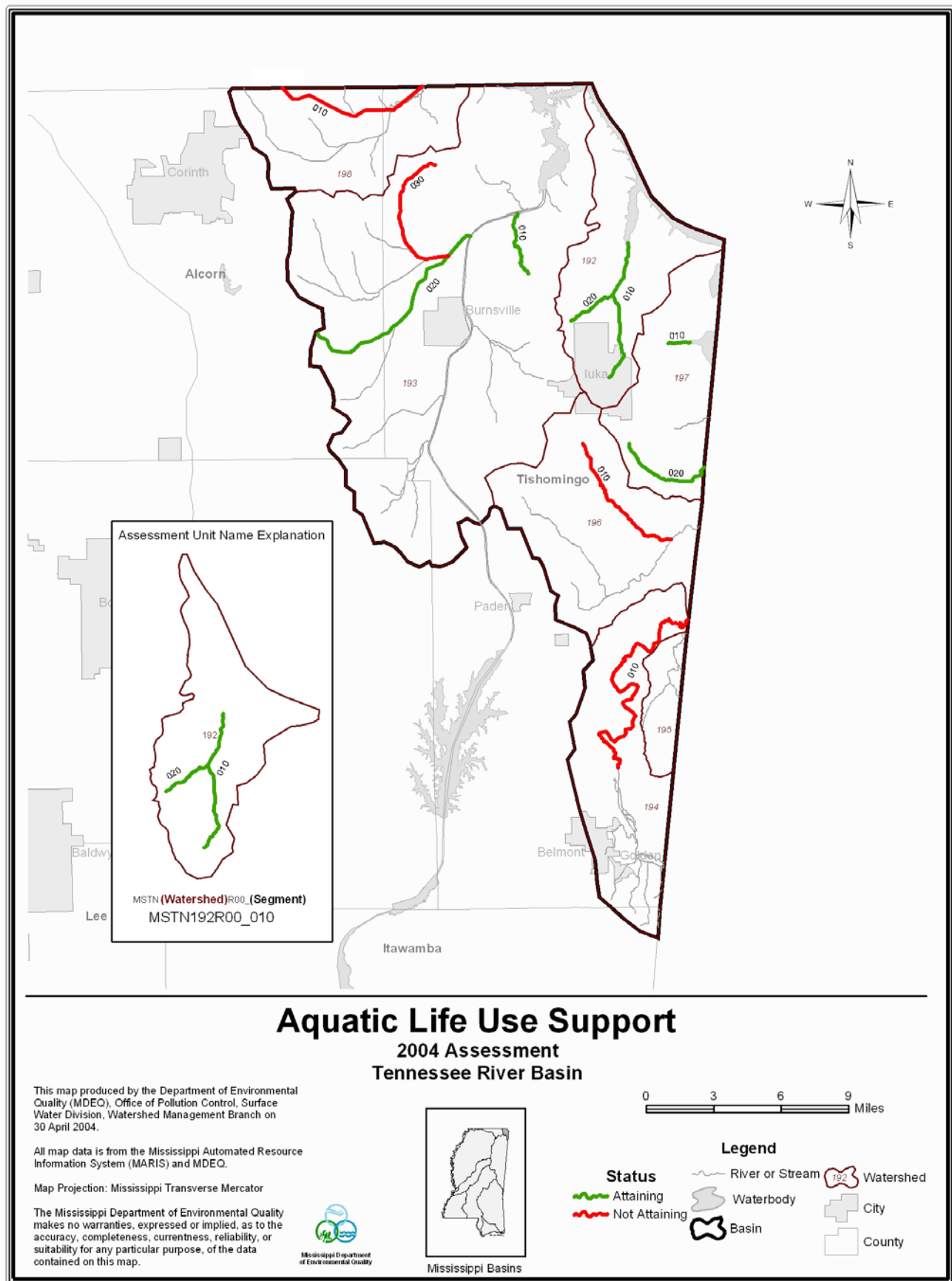


Figure 77: Aquatic Life Use Support Map-Tennessee River Basin

Recreation Use Support

Data collected as part a statewide §303(d) fecal coliform monitoring project were used to make the Recreation Use Support assessments. Of the Tennessee River Basin's assessed stream and river miles 8 miles were assessed as not attaining and are considered impaired (Table 34 and Figure 78). Figure 79 depicts a geo-referenced coverage of the Recreation Use Support assessments for the Tennessee River Basin.

Table 34: Recreation Use Support-Tennessee River Basin

Status	Miles
Attaining	0
Unknown	204
Total Not Attaining	8
TMDL not needed	0
TMDL needed	8
Total	212

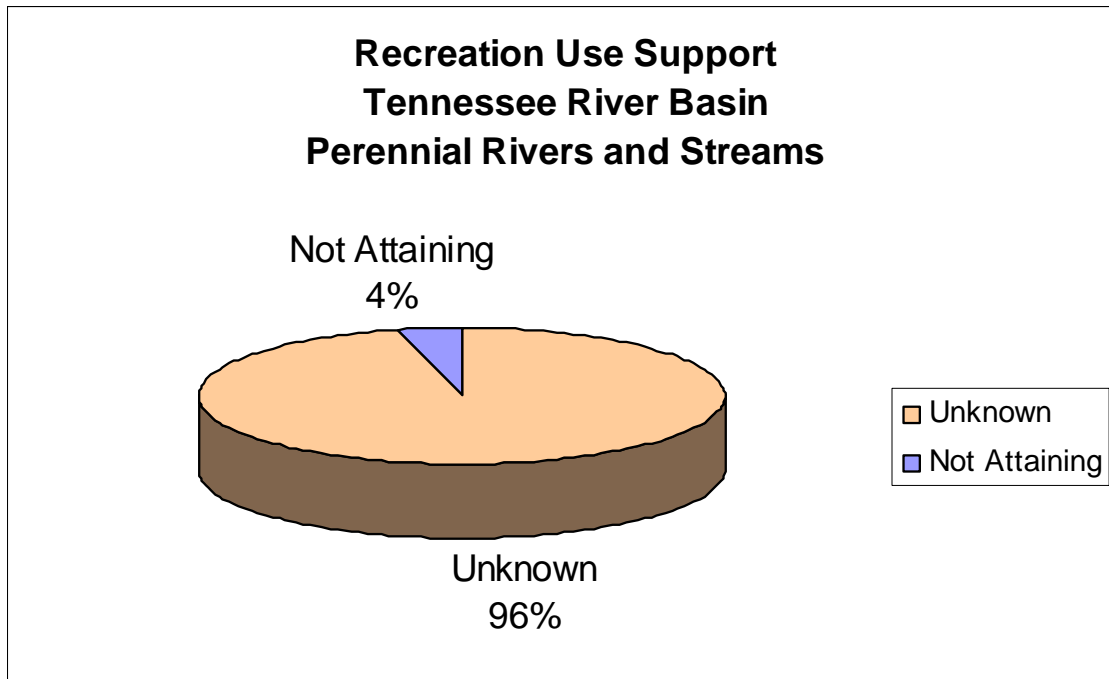


Figure 78: Recreation Use Support-Tennessee River Basin

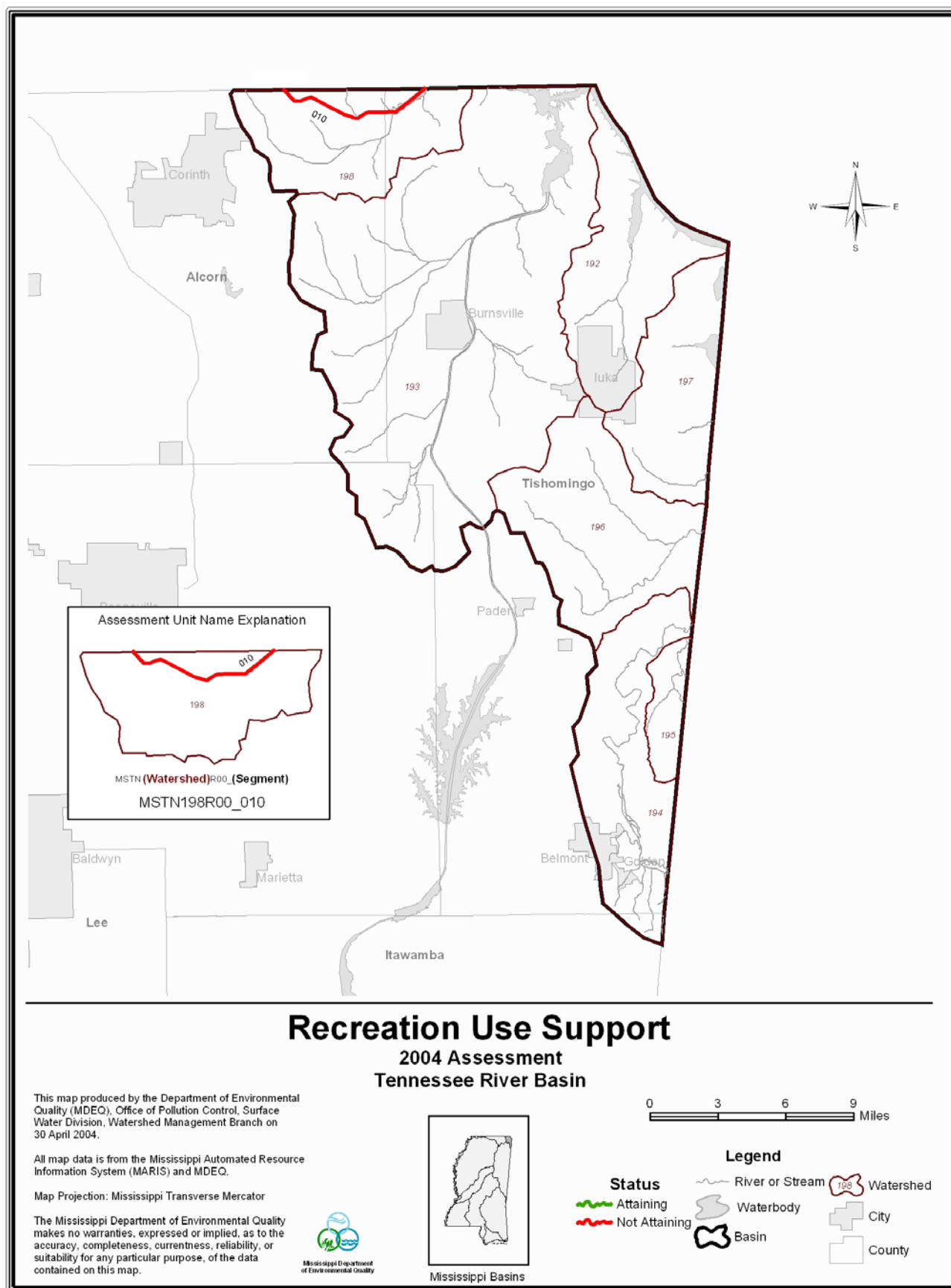


Figure 79: Recreation Use Support Map-Tennessee River Basin

Table 35: 2004§305(b) Assessed Water Bodies-Tennessee River Basin

TENNESSEE RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BEAR CREEK	MSTN194R00_010	MS194E	Tishomingo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BURNSTOWN FROM UNNAMED TRIBUTARY NORTH OF COUNTY ROAD 86 TO AL STATE LINE					
CANEY CREEK	MSTN193R00_030	MS193C	Tishomingo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR IUKA FROM HEADWATERS TO MOUTH AT LITTLE YELLOW CREEK					
CHAMBERS CREEK	MSTN198R00_010	MS198E	Alcorn, Tishomingo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CORINTH FROM HEADWATERS TO TN STATE LINE				Secondary Contact	Not Attaining
INDIAN CREEK	MSTN192R00_010	N/A	Tishomingo	Aquatic Life Support	Attaining
LOCATION: NEAR IUKA FROM HEADWATERS TO MOUTH AT TENNESSEE RIVER					
LITTLE CRIPPLE DEER CREEK	MSTN196R00_010	MS196LCD	Tishomingo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TISHOMINGO FROM HEADWATERS TO MOUTH AT CRIPPLE DEER CREEK					
LITTLE YELLOW CREEK	MSTN193R00_020	N/A	Alcorn, Tishomingo	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT TENN-TOM WATERWAY					
MILL CREEK	MSTN197R00_010	N/A	Tishomingo	Aquatic Life Support	Attaining
LOCATION: NEAR IUKA FROM HEADWATERS TO MOUTH AT TENNESSEE RIVER					
PENNYWINKLE CREEK	MSTN197R00_020	N/A	Tishomingo	Aquatic Life Support	Attaining
LOCATION: NEAR IUKA FROM HEADWATERS TO AL STATE LINE					

TENNESSEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
PICKENS BRANCH	MSTN192R00_020	N/A	Tishomingo	Aquatic Life Support	Attaining
LOCATION: NEAR IUKA FROM HEADWATERS TO MOUTH AT INDIAN CREEK					
UNNAMED TRIB TO TENN-TOM	MSTN193R00_010	N/A	Tishomingo	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT TENN-TOM					

TOMBIGBEE RIVER BASIN

Basin Description

The Tombigbee River Basin is located in the northeastern part of the State of Mississippi. The basin encompasses an area of approximately 6,100 square miles in northeast Mississippi and an additional 7,600 square miles in Alabama. The Mississippi portion of the Tombigbee basin incorporates 56 watersheds and is approximately 190 miles in length and averages 48 miles in width. The Tombigbee River itself begins in Itawamba County, Mississippi from the convergence of its main headwater streams of Big Brown Creek and Mackeys Creek. The most significant hydrologic feature in the basin is the Tennessee-Tombigbee Waterway (TTW). The waterway uses a series of dams and manmade canals as runs of the original Tombigbee River to connect the Tennessee River in Tennessee to Mobile Bay in Alabama. The TTW is used primarily for commercial and recreational purposes. Major tributaries to the Tombigbee River and TTW include Town Creek, Chuquatonchee Creek, Chiwapa Creek, Luxapallila Creek, and the Buttahatchee, Sucarnoochee, and Noxubee Rivers.



The topography of the Tombigbee River Basin ranges from mostly hilly to gently rolling with elevations in the headwaters from 500 to 600 feet above sea level to flat and gently rolling topography in the central and southern portion with elevations from 100 to 300 feet. The entire basin is largely forested but the Tombigbee River Basin does have several areas with large scale development around its significant urban population centers of Tupelo and Columbus.

The Tombigbee River Basin encompasses all or part of 19 counties in Mississippi. However, five counties, Tiptah, Union, Webster, Choctaw and Clarke have only a very small portion of their total area in the basin. The basin is sparsely populated, but has several urban and industrial areas especially surrounding the Cities of Tupelo, Columbus, and Aberdeen. According to the 2000 census, approximately 382,109 people live in the Tombigbee River Basin, or 63 people per square mile.

Figure 80: Tombigbee River Basin (MDEQ)

Land Use

A depiction of the major land cover in the basin is given in Figure 81. *Forests* that are predominately located in the northeastern and southwestern areas of the basin cover approximately 38% of the total land area of the Tombigbee River Basin (Figure 82). The basin is home to the Tombigbee National Forest and Noxubee National Wildlife Refuge. *Agricultural* areas including pasture, rangelands and croplands comprise approximately 37% of the basin's total land area. The Tombigbee River Basin has approximately 268,703 acres of *wetlands* (7% of the basin land area) with about 229,714 being bottomland hardwood forests. While the amount of *urban* area (1%) is small compared with other land uses, two counties, Lee and Lowndes sustain populations in excess of 50,000 people. *Water* sources (fresh and aquaculture) account for 1% of the land cover. *Disturbed areas* (strip mines, gravel pits, sandy areas, barren, and transitional areas) make up the remaining 16% of the land use in the basin.

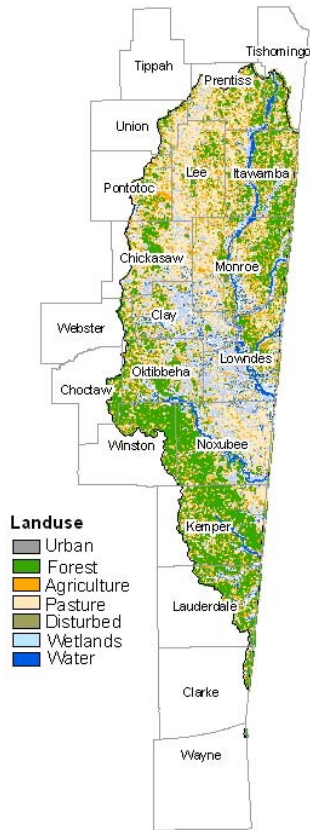


Figure 81: Major Land Cover in the Tombigbee River Basin (MARIS)

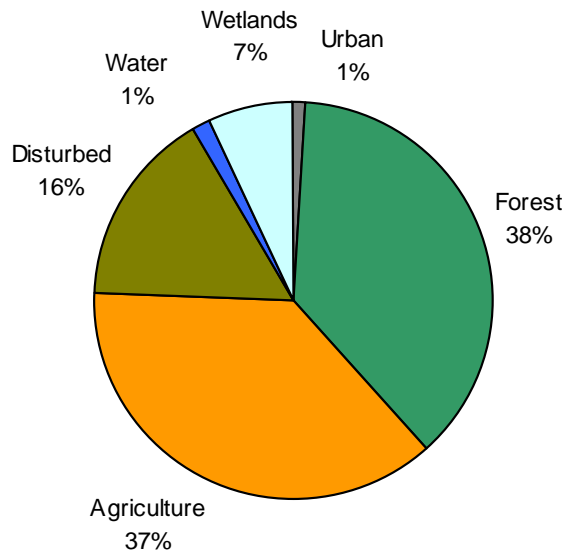


Figure 82: Distribution of Land Cover in the Tombigbee River Basin (MARIS)

Water Resources

The Tombigbee River Basin in Mississippi has approximately 11,690 miles of perennial and intermittent rivers and streams. According to the State's water quality standards (WQS), the Tombigbee River and most of its tributaries are classified as Fish and Wildlife streams. In addition to their Fish and Wildlife Classification, two water bodies are additionally classified as Public Water Supplies in the basin. They are Luxapallila Creek and Yellow Creek at the Mississippi-Alabama state line, both near Columbus.

Streams in the central portion of the Tombigbee River Basin have little base flow because these areas have chalk outcrops and heavy surface clays. Streams in the northeastern portion of the Tombigbee River Basin, with headwaters mainly in Alabama, have more base flow. The TTW intercepts most of these flows. The flow regime in streams in the southern most portion of the Tombigbee River Basin is variable.

Several public reservoirs and lakes are found in this basin but the predominant surface water feature in the Tombigbee River Basin is the TTW which is generally lentic in nature. The TTW, having a length of 137 miles in Mississippi, stretches from Tishomingo County at the northern end of the basin through Lowndes County into Alabama. In Mississippi, the TTW parallels and combines with the Tombigbee River from its headwaters to the Alabama state line. This waterway consists of a series of interconnected lakes, locks and pools whose primary usage is recreational. Major TTW lakes and pools include Bay Springs Lake, Pool C, Aberdeen Lake, Columbus Lake, and the Aliceville Pool. In addition to the TTW lakes which are classified for Recreation in addition to Fish and Wildlife, nine other lakes in the basin (Chiwapa Reservoir, Choctaw Lake, Davis Lake, Lake Lamar, Lake Lowndes, Lake Monroe, Lake Tom Bailey, Okatibbeha County Lake, and Tombigbee State Park lake) are also specifically classified for Recreation according to the state's WQS.

In terms of biological resources, the Tombigbee River and its tributaries is one of the most biologically diverse drainage systems in Mississippi despite decades of large-scale manmade alterations. Approximately 115 species of fishes and at least 40 species of freshwater mussels have been found in the Basin. However, the Tombigbee Basin in Mississippi is experiencing a large rate of loss in its mussel populations. The construction of the Tennessee-Tombigbee Waterway reduced the diversity of aquatic habitats and destroyed most of the gravel riffles and runs that were required by mussels found in the Tombigbee River. As a result, many of the mussel species and numerous fish species were eliminated from the dammed and channelized segments of the river as their habitats and populations became fragmented. Nine species of mussels still known to occur in the Tombigbee River Basin are now listed as threatened or endangered by the state. The crystal darter and the frecklebelly madtom, two of the 94 species of fishes found in the Buttahatchee River, a main tributary of the Tombigbee River have also been designated as endangered. The loss of aquatic diversity in the Tombigbee River is mostly due to large in-stream gravel mining operations that have severely altered the channel causing massive erosion, or headcutting upstream of the mining pits. In spite of this, the

Tombigbee River continues to support a diversity of aquatic life. Several Tombigbee River Basin water bodies have been proposed for review as potential Mississippi Natural and Scenic Waterways System water bodies including Buttahatchee River, Noxubee River, Bull Mountain Creek, and East Fork Tombigbee River.

Surface Water Assessment

Designated Use Support

The assessments for the Tombigbee River Basin were made based on data from 117 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project (M-BISQ) and the §303(d) fecal coliform monitoring project (Figure 83). The perennial streams where the monitoring stations were located represented the mainstem drainage for each 11-digit watershed in the basin. Use support status for the basin is presented and summarized with causes and sources of impairment.

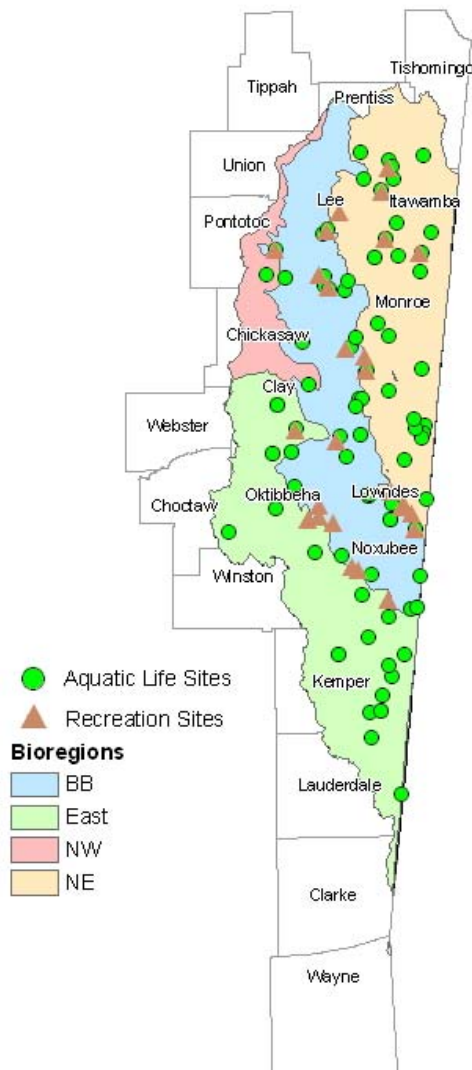


Figure 83: Tombigbee River Basin Monitoring Stations

MDEQ assessed approximately 31% (1,292 miles) of the total 4,175 perennial miles of streams and rivers in the Tombigbee River Basin. The status of water quality on the remaining 69% (2,883 miles) of the basin's perennial rivers and streams is unknown. The majority of stream miles (64%) in the Tombigbee River Basin is composed of intermittent streams and therefore is not readily assessable. A summary of use support for the basin's assessed rivers and streams is found in Table 36 and Figure 84. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

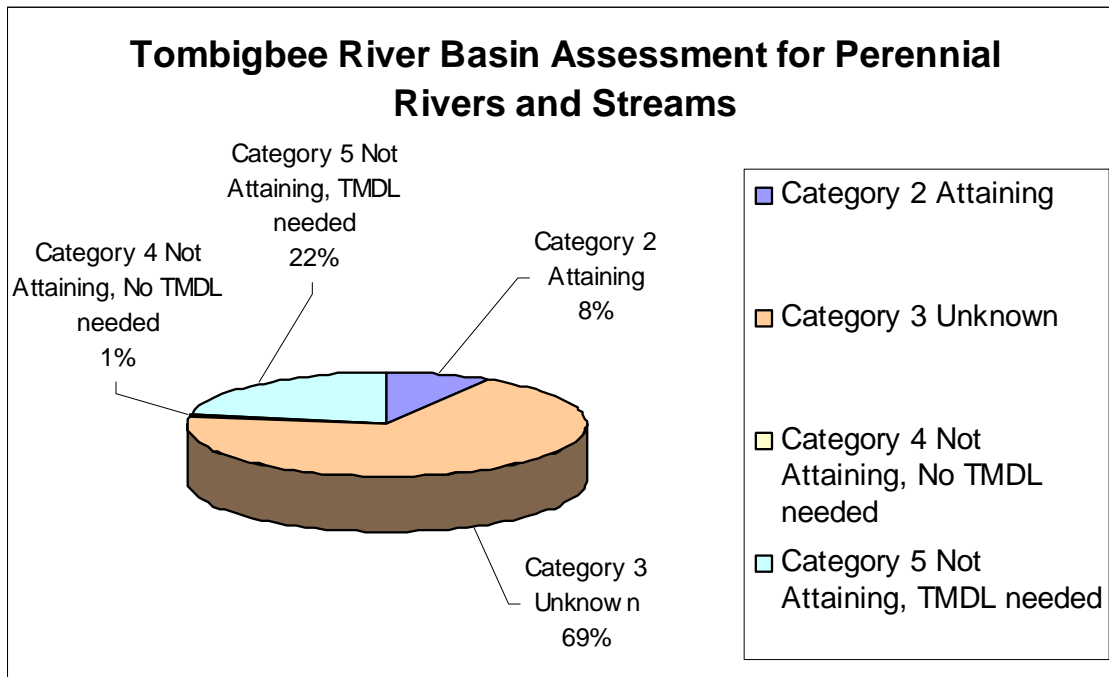
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the Tombigbee River Basin, approximately 8% are in category 2 for attaining some uses but unknown for remaining water body uses, and 1% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 22% of the assessed water bodies. The status of the remaining 69% of water bodies in the Tombigbee River Basin is unknown and these waters are reflected in category 3. Of the 909 miles of waters in category 5, 70% (636 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the Tombigbee River Basin section of the 2004 §303(d) list. Please refer to Table 40 at the end of the Tombigbee River Basin section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 36: Summary of Tombigbee River Basin Use Support Assessments – Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	353
Category 3: Unknown/Insufficient Data for Assessment	10,398
Intermittent Miles	7,515
Perennial Miles	2,883
Category 4: Not Attaining – No TMDL Needed	30
A. TMDL Completed	10
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	20
Category 5: Not Attaining – TMDL Needed	909
A. Pollutant Identified	273
B. Biological Impairment- Cause Unknown	636
Total Miles	11,690

**Figure 84: Tombigbee River Basin Assessment of Perennial Rivers and Streams**

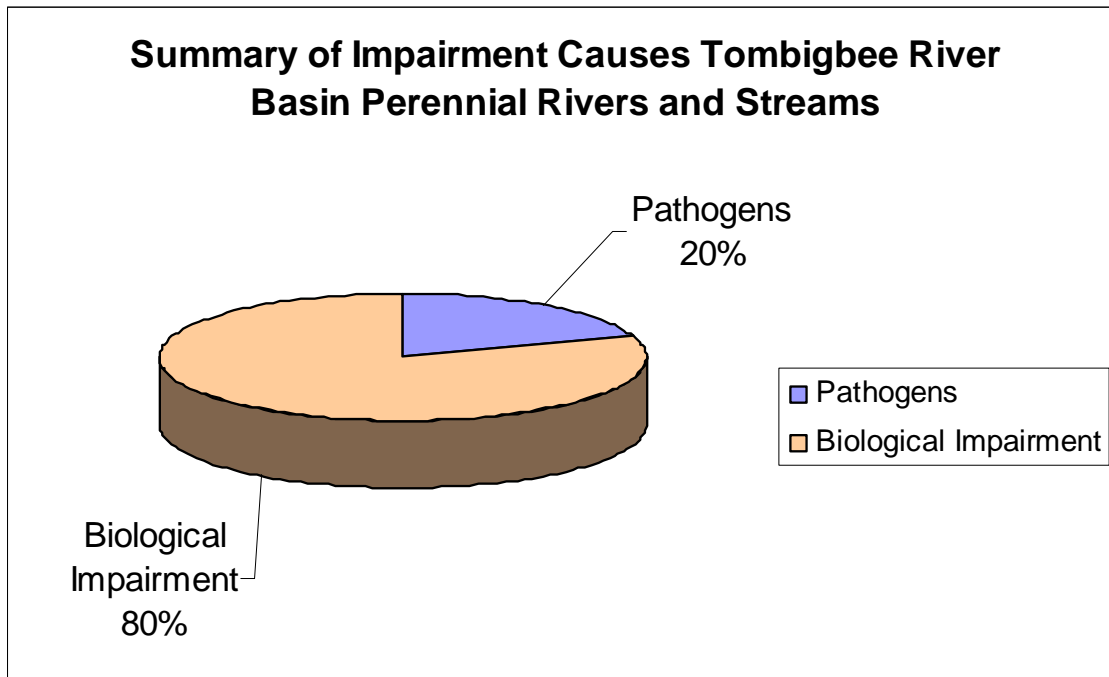
Causes and Sources of Impairment of Designated Uses

Causes and sources of impairment were evaluated for streams and rivers having one or more uses impaired. Total assessed sizes of streams and rivers affected by various cause categories are given in Table 37 and Figure 85. For the majority of miles of assessed rivers not meeting their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. Other causes of impairment noted in the basin are from pathogens. For these impaired waters, the next step in the State's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not applicable to the TMDL process, other water quality management actions will be needed. The source of impairments for the majority of non-attaining waters assessed in the Tombigbee River Basin is unknown. As above, most of impairments were determined to be biological and therefore sources of the impairment are yet to be determined. Other sources that contributed to biological impairment decisions were channelization, sedimentation, and removal of riparian vegetation. These sources are considered to be "pollution" and therefore a TMDL cannot be developed.

Table 37: Summary of Impairment Causes-Tombigbee River Basin

Cause Categories	Total Miles
Biological Impairment*	867
Pathogens	213

* Note: Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

**Figure 85: Summary of Impairment Causes for Perennial Rivers and Streams-Tombigbee River Basin**

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the Tombigbee River Basin's assessed stream and river miles, approximately 306 miles of perennial rivers and streams are attaining their aquatic life use, while 867 miles were assessed as not attaining and are considered impaired (Table 38 and Figure 86). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figures 87-89 depict geo-referenced coverages of the Aquatic Life Use Support assessments for the Tombigbee River Basin.

Table 38: Aquatic Life Use Support-Tombigbee River Basin

Status	Miles
Attaining	306
Unknown	3,002
Total Not Attaining	867
TMDL not needed	27
TMDL needed	840
Total	4,175

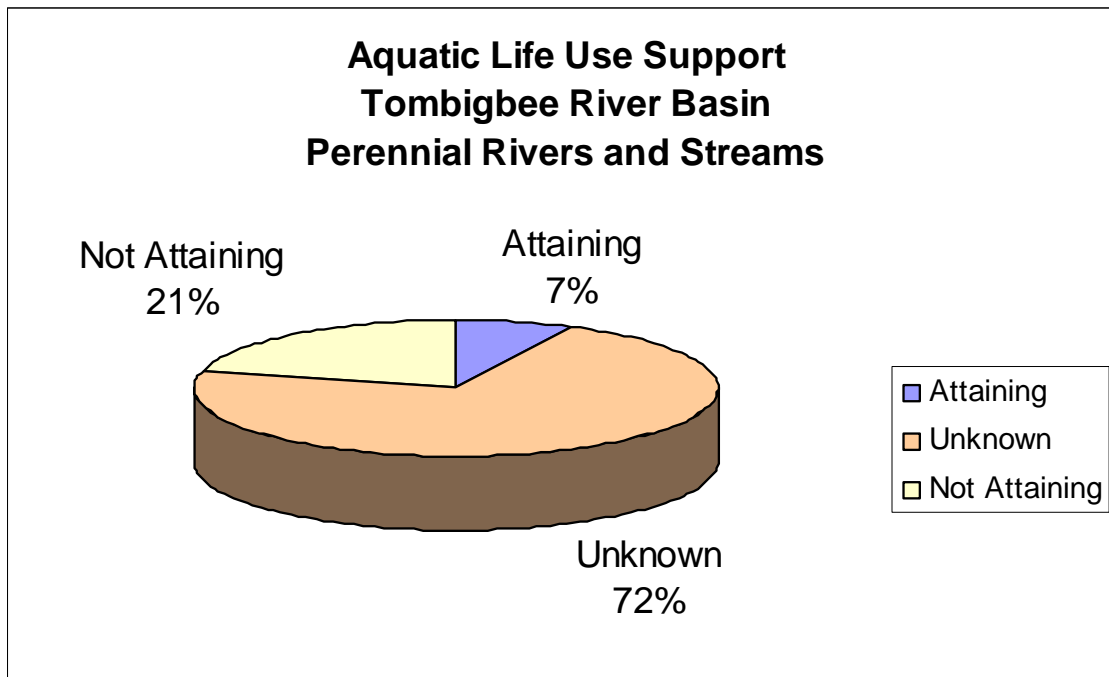


Figure 86: Aquatic Life Use Support-Tombigbee River Basin

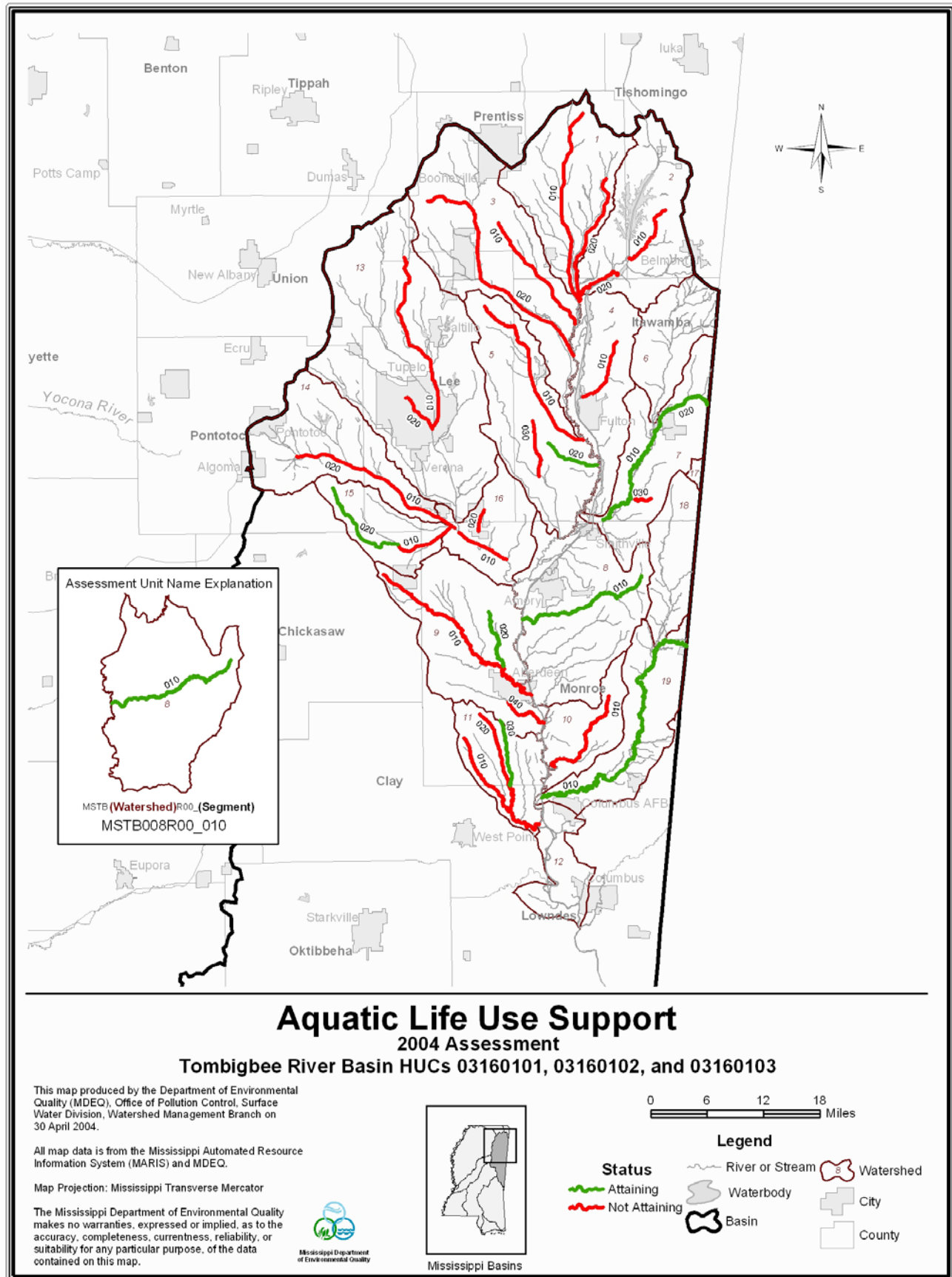


Figure 87: Aquatic Life Use Support Map-Upper Tombigbee River Basin

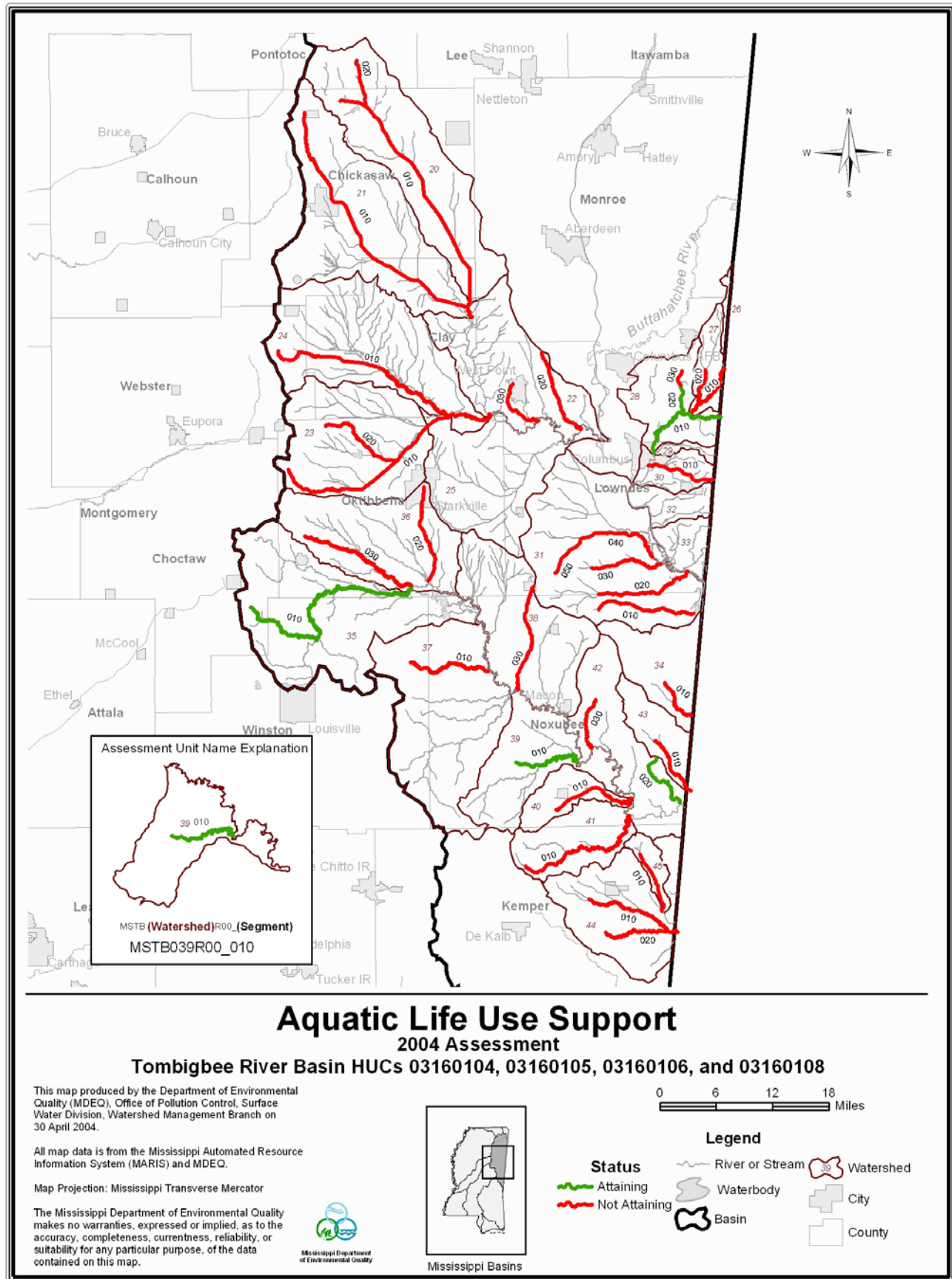


Figure 88: Aquatic Life Use Support Map-Middle Tombigbee River Basin

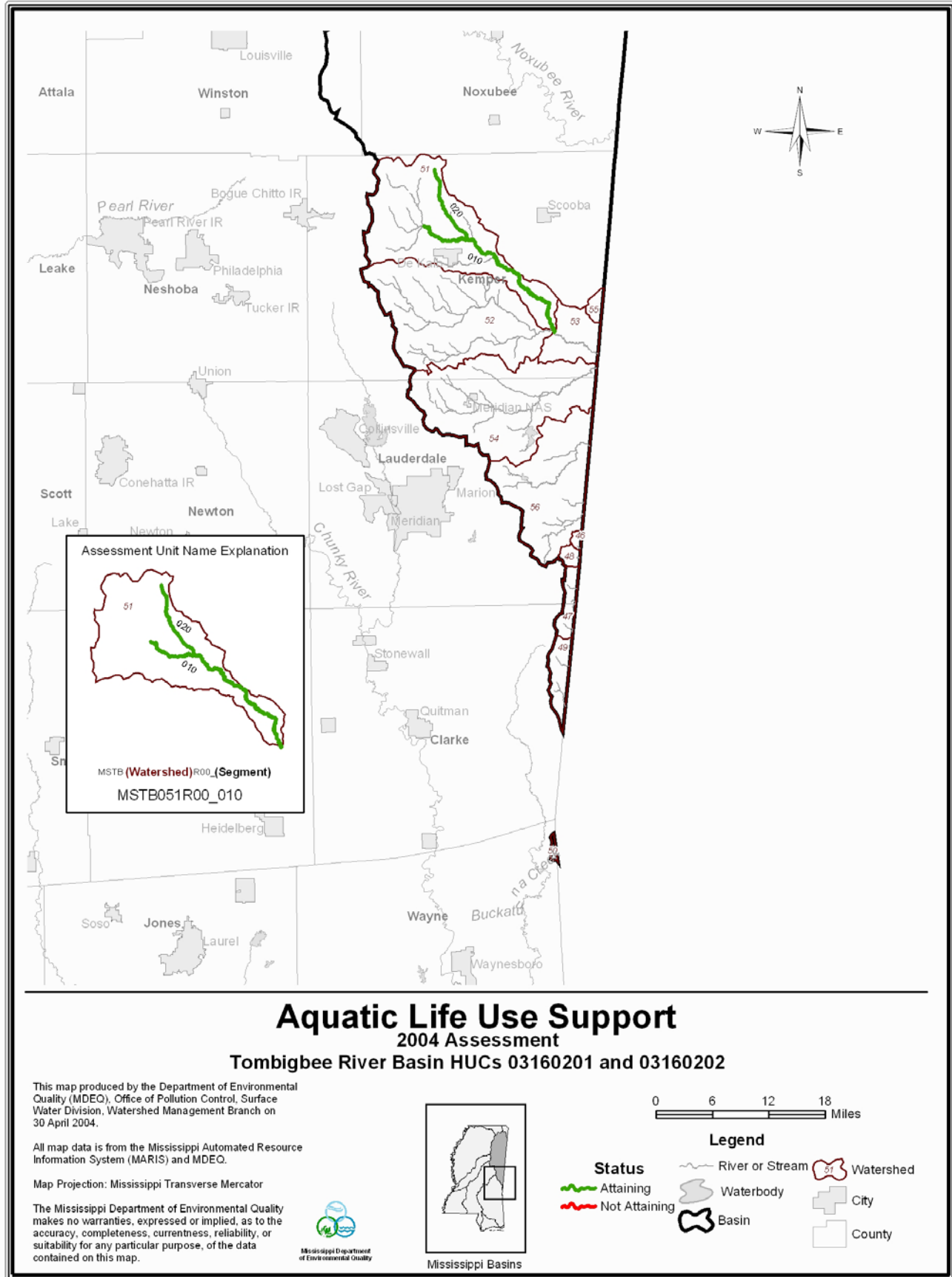


Figure 89: Aquatic Life Use Support Map-Lower Tombigbee River Basin

Recreation Use Support

Data collected as part a statewide §303(d) fecal coliform monitoring project were used to make the Recreation Use Support assessments. Of the Tombigbee River Basin's assessed stream and river miles, approximately 351 miles of perennial rivers and streams are attaining their recreation use, while 214 miles were assessed as not attaining and are considered impaired (Table 39 and Figure 90). Figures 91-93 depict geo-referenced coverages of the Recreation Use Support assessments for the Tombigbee River Basin.

Table 39: Recreation Use Support-Tombigbee River Basin

Status	Miles
Attaining	351
Unknown	3,610
Total Not Attaining	214
TMDL not needed	8
TMDL needed	206
Total	4,175

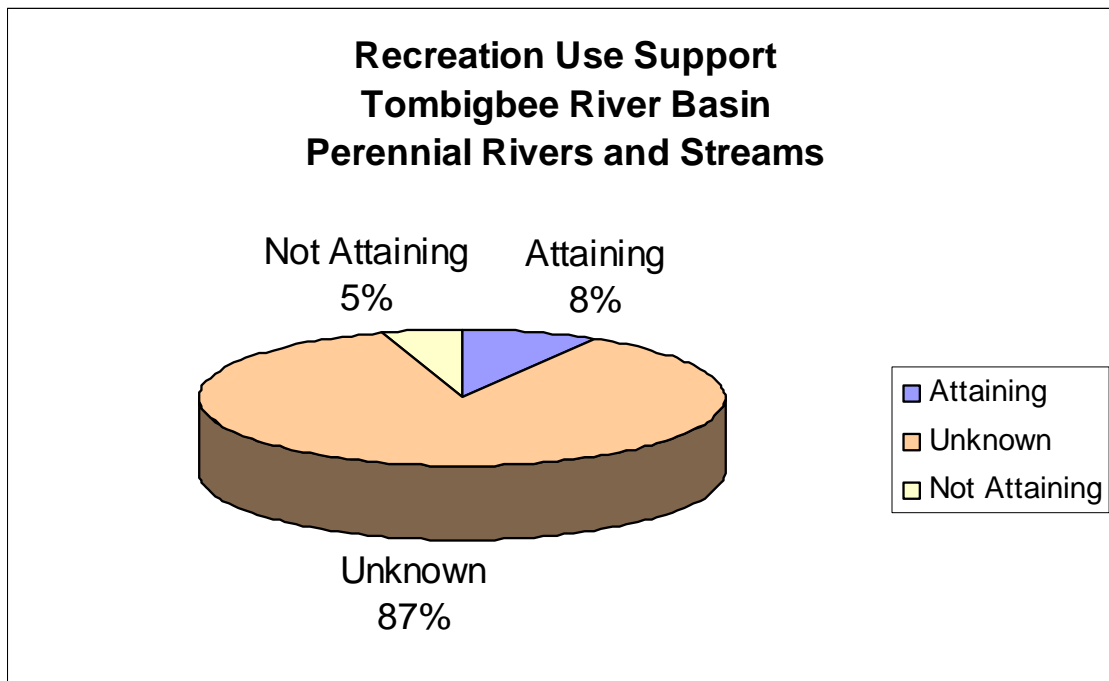


Figure 90: Recreation Use Support-Tombigbee River Basin

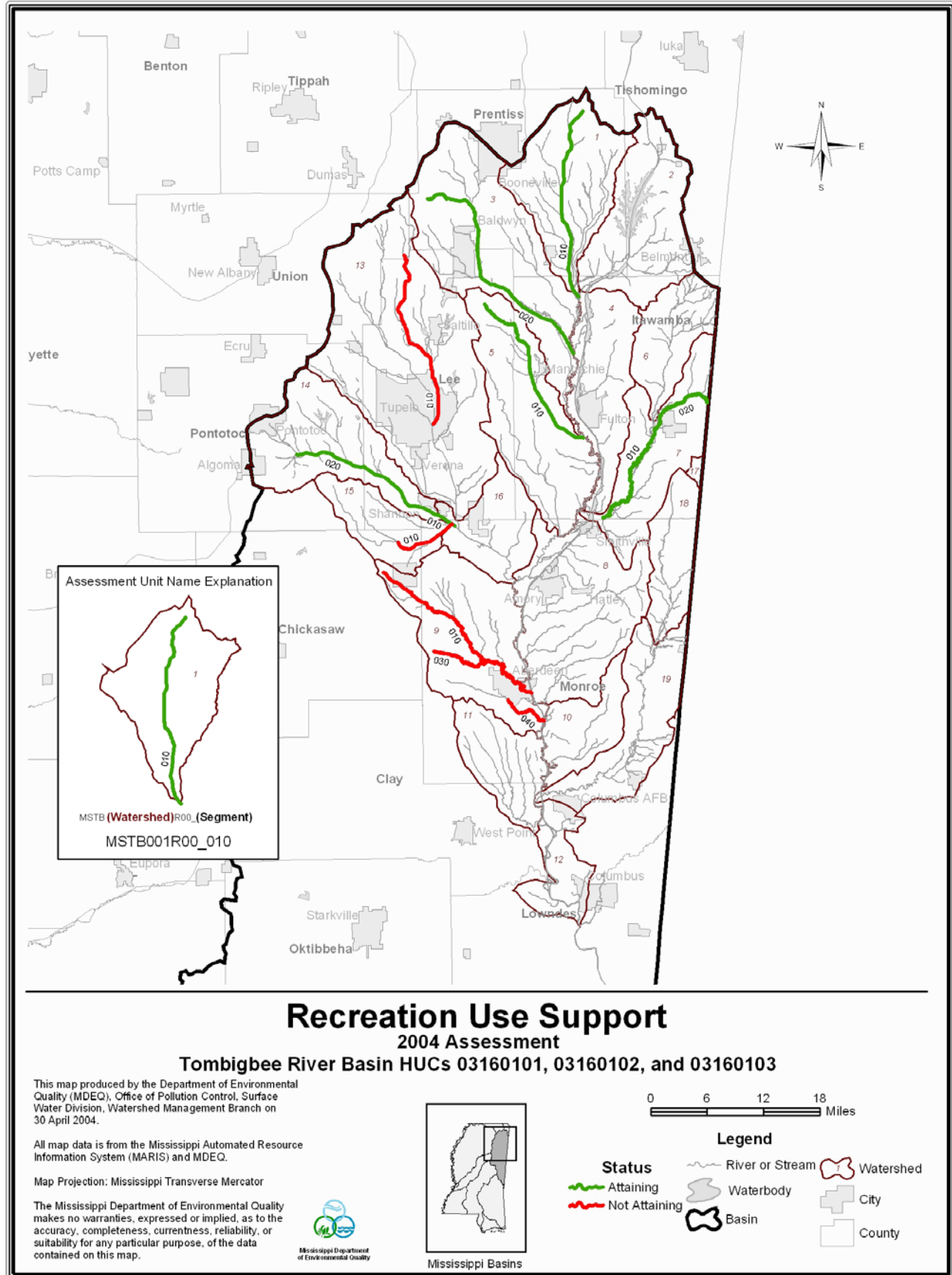


Figure 91: Recreation Use Support Map-Upper Tombigbee River Basin

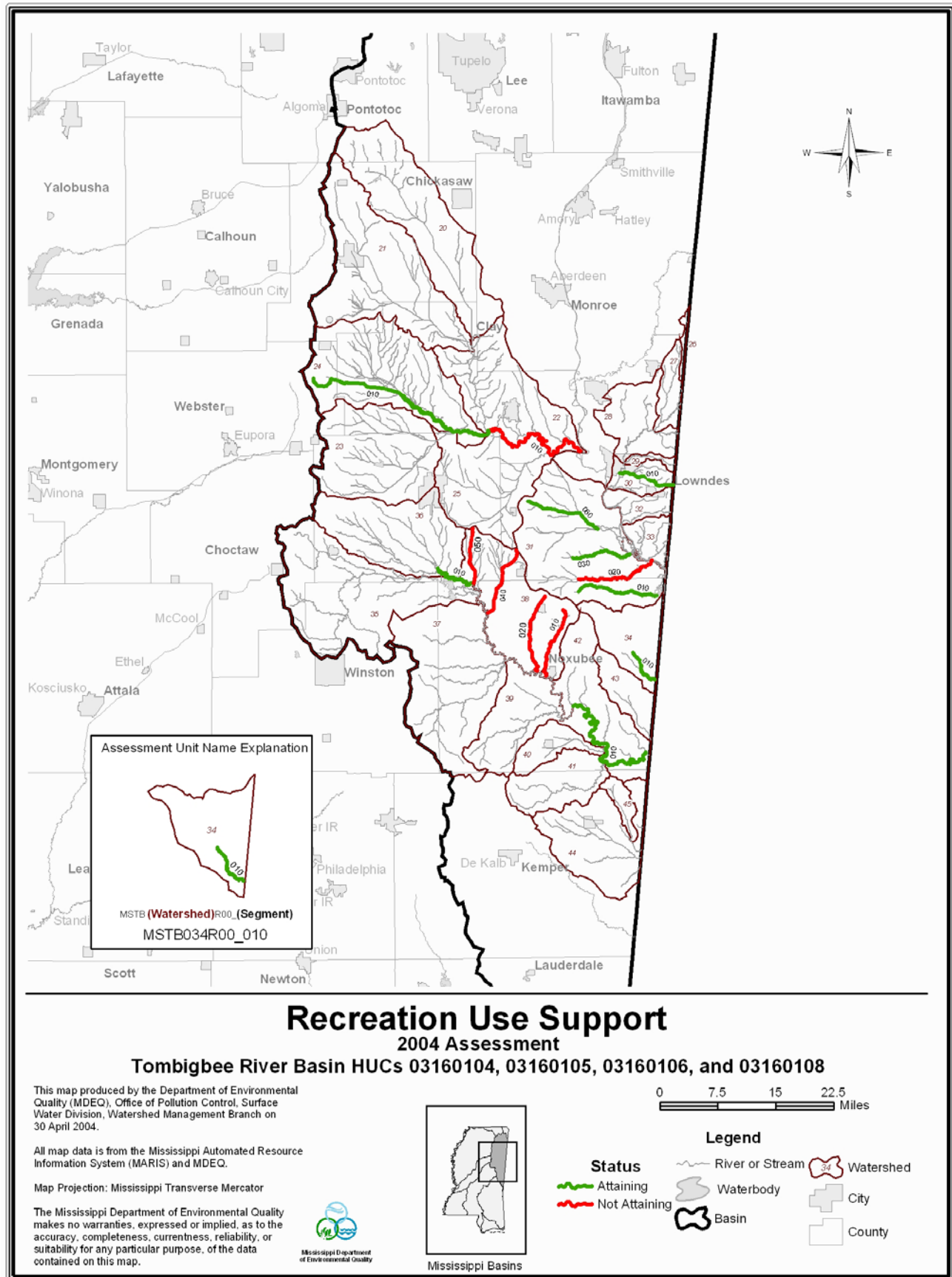


Figure 92: Recreation Use Support Map-Middle Tombigbee River Basin

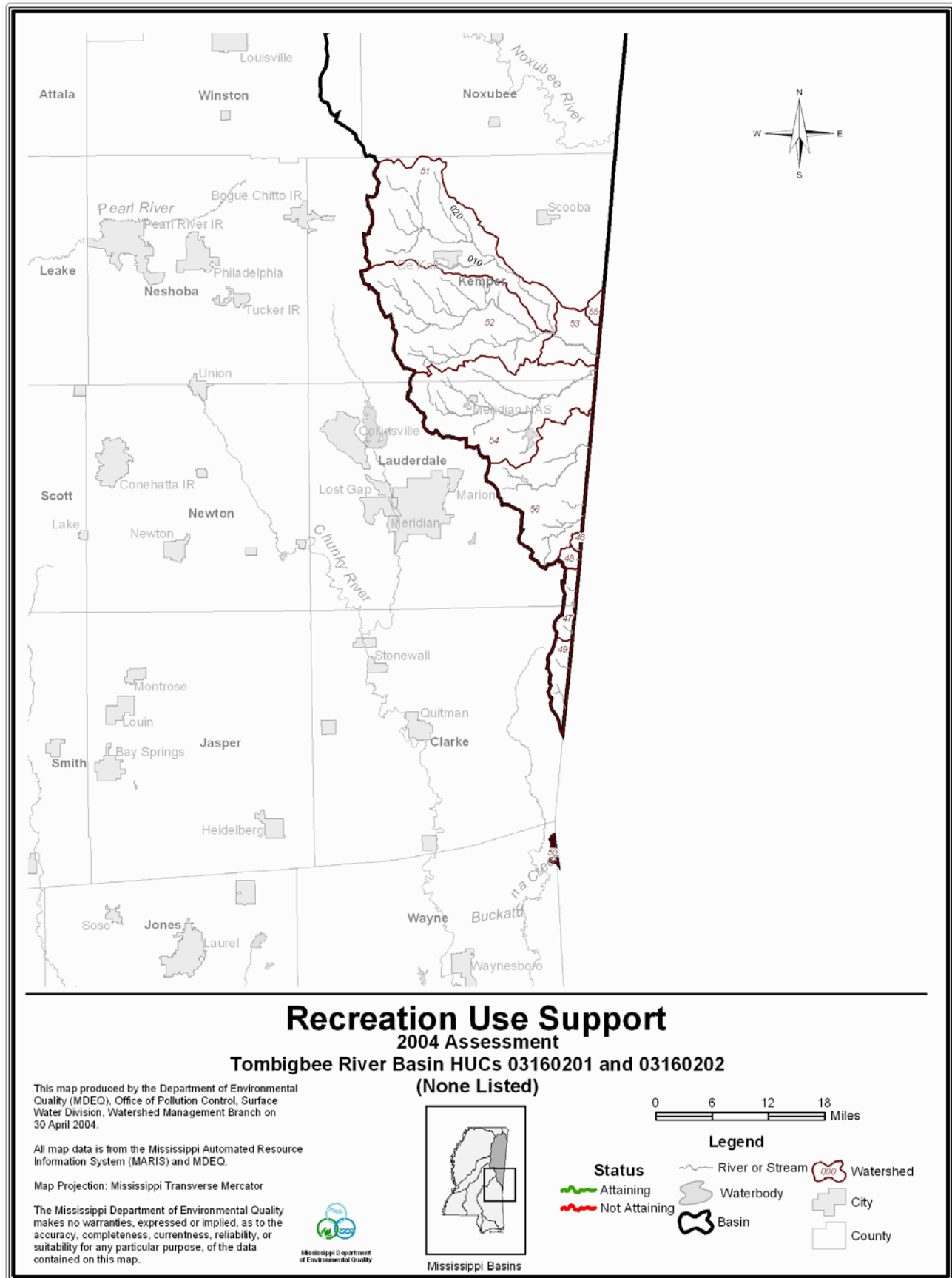


Figure 93: Recreation Use Support Map-Lower Tombigbee River Basin

Table 40: 2004 §305(b) Assessed Water Bodies-Tombigbee River Basin

TOMBIGBEE RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
ALAMUCHEE CREEK	MSTB056R00_010	N/A	Lauderdale	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO AL STATE LINE					
ASH CREEK	MSTB042R00_020	N/A	Noxubee	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
BIG BROWN CREEK	MSTB001R00_010	MS001E	Itawamba, Prentiss	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MARIETTA FROM HEADWATERS TO CONFLUENCE WITH LITTLE BROWN CREEK				Secondary Contact	Attaining
BIG SCOoba CREEK	MSTB044R00_010	MS044E	Kemper	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SCOoba FROM NEAR HAPPERS LAKE TO CONFLUENCE WITH BODKA CREEK					
BLACKWATER CREEK	MSTB052R00_010	N/A	Kemper	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT SUCCARNOOCHEE CREEK					
BODKA CREEK	MSTB044R00_020	MS044B	Kemper	Aquatic Life Support	Not Attaining
LOCATION: NEAR ELECTRIC MILLS FROM HEADWATERS TO AL STATE LINE					
BOGUE CHITTO CREEK	MSTB034R00_010	MS034E	Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR DINSMORE FRO HEADWATERS TO AL STATE LINE				Secondary Contact	Attaining
BROKEN PUMPKIN CREEK	MSTB031R00_010	MS031BPE	Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BIG VALLEY FROM HEADWATERS TO AL STATE LINE				Secondary Contact	Attaining

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BROWNING CREEK	MSTB038R00_050	MSTB038R00_050		Secondary Contact	Not Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT CYPRESS CREEK					
BULL MOUNTAIN CREEK	MSTB007R00_020	N/A	Itawamba	Aquatic Life Support	Attaining
				Secondary Contact	Attaining
LOCATION: FROM AL STATE LINE TO CONFLUENCE WITH GUM CREEK					
BULL MOUNTAIN CREEK	MSTB007R00_010	N/A	Itawamba	Aquatic Life Support	Attaining
				Secondary Contact	Attaining
LOCATION: FROM CONFLUENCE WITH GUM CREEK TO MOUTH AT TEN-TOM WATERWAY					
BUTTAHATCHIE RIVER	MSTB019R00_010	N/A	Lowndes, Monroe	Aquatic Life Support	Attaining
LOCATION: FROM AL STATE LINE TO MOUTH AT TOMBIGBEE RIVER					
CATALPA CREEK	MSTB025R00_010	MS025E	Clay, Lowndes, Oktibbeha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STEPHEN FROM HEADWATERS TO CONFLUENCE WITH TIBBEE CREEK					
CEDAR CREEK	MSTB031R00_030	MS031CE	Lowndes	Aquatic Life Support	Not Attaining, Biological Impairment
				Secondary Contact	Attaining
LOCATION: NEAR TRINITY FROM HEADWATERS TO MOUTH AT TEN-TOM WATERWAY					
CEDAR CREEK	MSTB009R00_030	MS009MM	Monroe	Secondary Contact	Not Attaining, TMDL Completed
LOCATION: NEAR ABERDEEN FROM HEADWATERS TO MOUTH AT MATTUBY CREEK					
CHIWAPA CREEK	MSTB014R00_010	MS014C2E	Lee, Monroe, Pontotoc	Aquatic Life Support	Not Attaining, TMDL Not Applicable, Pollution
				Secondary Contact	Attaining
LOCATION: NEAR PINE GROVE FROM CONFLUENCE WITH MUBBY CREEK TO CONFLUENCE WITH TALLA BINELA CREEK					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
CHIWAPA CREEK	MSTB014R00_020	MS014C1E	Pontotoc	Aquatic Life Support	Not Attaining, TMDL Not Applicable, Pollution
LOCATION: NEAR PONTOTOC FROM HEADWATERS TO CONFLUENCE WITH MUBBY CREEK				Secondary Contact	Attaining
CHUQUATONCHEE CREEK	MSTB020R00_010	MS020CE	Chickasaw, Clay	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ABBOTT FROM HEADWATERS TO HOULKA CREEK					
COOPER CREEK	MSTB027R00_020	MS027C	Lowndes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STEENS FROM CONFLUENCE WITH MAYHEW CREEK TO MOUTH AT YELLOW					
CUMMINGS CREEK	MSTB004R00_010	MS004CE	Itawamba	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR FULTON FROM HEADWATERS TO THE TEN-TOM WATERWAY					
CYPRESS CREEK	MSTB036R00_030	MS036E	Oktibbeha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CRAIG SPRINGS FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
DONIVAN CREEK	MSTB003R00_010	MS003DE	Itawamba, Prentiss	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR KIRKVILLE FROM HEADWATERS TO THE TOMBIGBEE RIVER					
GILMER CREEK	MSTB031R00_060	N/A	Lowndes	Secondary Contact	Attaining
LOCATION: NEAR ARTESIA FROM HEADWATERS TO CONFLUENCE WITH MAGOWAH CREEK					
GOODFOOD CREEK	MSTB020R00_020	MS020GE	Chickasaw, Pontotoc	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GOODFOOD FROM HEADWATERS TO CHUQUATONCHEE CREEK					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
GREEN CREEK	MSTB005R00_020	N/A	Itawamba	Aquatic Life Support	Attaining
LOCATION: AT VAN BUREN FROM HEADWATERS TO MOUTH AT TOMBIGBEE RIVER					
GREENWOOD CREEK	MSTB005R00_030	MS005G	Itawamba	Aquatic Life Support	Not Attaining
LOCATION: NEAR EVERGREEN FROM HEADWATERS TO CONFLUENCE WITH BOGUE FALA					
HANG KETTLE CREEK	MSTB011R00_020	MS011E	Clay, Monroe	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VINTON FROM HEADWATERS TO MOUTH AT TOWN CREEK					
HOLLIS CREEK	MSTB036R00_020	MS036HE	Oktibbeha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STARKVILLE FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
HORSE HUNTERS CREEK	MSTB038R00_010	MS038E	Noxubee	Secondary Contact	Not Attaining, Biological Impairment
LOCATION: NEAR MACON FROM HEADWATERS TO THE MOUTH AT NOXUBEE RIVER					
HOULKA CREEK	MSTB021R00_010	MS021EE	Chickasaw, Clay	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ABBOTT FROM HEADWATERS TO CHUQUATONCHEE CREEK					
HOWARD CREEK	MSTB028R00_020	N/A	Lowndes	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH UNNAMED TRIB TO MOUTH AT LUXAPALILA CREEK					
HOWARD CREEK	MSTB028R00_030	MS028M1	Lowndes	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH UNNAMED TRIB.					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
JAMES CREEK	MSTB031R00_020	MS031JE	Lowndes, Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BIGBEE VALLEY FROM HEADWATERS TO MOUTH AT TEN-TOM WATERWAY				Secondary Contact	Not Attaining
JAMES CREEK	MSTB009R00_040	MS009JM2	Monroe	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: NEAR ABERDEEN FROM VISTA POLYMER OUTFALL TO MOUTH AT TEN-TOM WATERWAY				Secondary Contact	Not Attaining
JOES CREEK	MSTB038R00_020	MS038M	Noxubee	Secondary Contact	Not Attaining
LOCATION: AT BROOKSVILLE FROM HEADWATERS ABOVE ALT HWY 45 TO MOUTH AT NOXUBEE RIVER					
KINCAIDE CREEK	MSTB033R00_010	MS033K	Lowndes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT FORRESTON FROM AL STATE LINE TO NASH CREEK					
KINGS CREEK	MSTB013R00_020	MS013K	Lee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT TUPELO FROM HEADWATERS TO MOUTH AT TOWN CREEK					
LINE CREEK	MSTB024R00_010	MS024E	Clay, Oktibbeha, Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MHOONS VALLEY FROM HEADWATERS TO CONFLUENCE WITH TRIM CANE CREEK				Secondary Contact	Attaining
LITTLE BROWN CREEK	MSTB001R00_020	MS001LB	Itawamba, Prentiss	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MARIETTA FROM HEADWATERS TO MACKEYS CREEK					
LONG BRANCH	MSTB023R00_020	MS023L	Oktibbeha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STARKVILLE FORM HEADWATERS TO CONFLUENCE WITH TRIM CANE CREEK					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LUXAPALILA CREEK	MSTB028R00_010	N/A	Lowndes	Aquatic Life Support	Attaining
LOCATION: AT COLUMBUS FROM AL STATE LINE TO CONFLUENCE WITH MAGBY CREEK					
MACEDONIA CREEK	MSTB039R00_010	N/A	Noxubee	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
MACKEYS CREEK	MSTB002R00_020	MS002ME	Itawamba, Prentiss	Aquatic Life Support	Not Attaining
LOCATION: NEAR SANDY SPRINGS FROM HEADWATERS TO MOUTH AT BIG BROWN CREEK					
MAGOWAH CREEK	MSTB031R00_040	MS031ME	Lowndes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ARTESIA FROM CONFLUENCE OF NORTH BRANCH AND SOUTH BRANCH TO THE MOUTH AT TEN-TOM WATERWAY					
MANTACHIE CREEK	MSTB005R00_010	MS005ME	Itawamba, Lee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VAN BUREN FROM HEADWATERS TO THE TOMBIGBEE RIVER				Secondary Contact	Attaining
MATTUBY CREEK	MSTB009R00_010	MS009ME	Chickasaw, Monroe	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ABERDEEN FROM HEADWATERS TO MOUTH AT TEN-TOM WATERWAY				Secondary Contact	Not Attaining
MCCRARY CREEK	MSTB030R00_010	MS030E	Lowndes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR COLUMBUS FROM AL STATE LINE TO CONFLUENCE WITH LUXAPALILA CREEK				Secondary Contact	Attaining
MCKINLEY/WILSON CREEK	MSTB010R00_010	MS010E	Monroe	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR NEW HAMILTON FROM HEADWATERS OF WILSON CREEK THEN TO MCKINLEY CREEK TO THE MOUTH OF MCKINLEY CREEK AT THE TOMBIGBEE RIVER					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
MUD CREEK	MSTB013R00_010	MS013ME	Lee, Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TUPELO FROM HEADWATERS TO TOWN CREEK				Secondary Contact	Not Attaining
NOXUBEE RIVER	MSTB036R00_010	N/A	Noxubee, Oktibbeha	Secondary Contact	Attaining
LOCATION: FROM CONFLUENCE WITH HOLLIS CREEK TO CONFLUENCE WITH BROWNING CREEK					
NOXUBEE RIVER	MSTB042R00_010	N/A	Noxubee	Secondary Contact	Attaining
LOCATION: NEAR MACON FROM CONFLUENCE WITH PLUM CREEK TO CONFLUENCE WITH ASH					
NOXUBEE RIVER	MSTB035R00_010	N/A	Choctaw, Oktibbeha, Winston	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH CYPRESS CREEK					
PAWTICFAW CREEK	MSTB052R00_020	N/A	Kemper	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BLACKWATER CREEK					
PLUM CREEK	MSTB042R00_030	MS042E	Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MACON FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
ROBERTS BRANCH	MSTB016R00_020	MS016RE	Lee, Monroe	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT NETTLETON FROM HEADWATERS TO CONFLUENCE WITH COWPENNA CREEK					
ROCK CREEK	MSTB002R00_010	MS002RE	Itawamba, Tishomingo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BELMONT FROM HEADWATERS TO THE TEN-TOM WATERWAY					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
SHOTBAG CREEK	MSTB038R00_040	MSTB038R00_020	Lowndes, Noxubee, Oktibbeha	Secondary Contact	Not Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
SHUQUALAK CREEK	MSTB040R00_010	MS040E	Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SHUQUALAK FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
SHY HAMMOCK CREEK	MSTB045R00_010	MS045E	Kemper	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GILES FROM HEADWATERS TO PUSHACOONA CREEK					
SMITH CREEK	MSTB007R00_030	MS007S	Itawamba	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TURON FROM HEADWATERS TO CONFLUENCE WITH JIMS CREEK					
SOUTH BRANCH MAGOWAH CREEK	MSTB031R00_050	MS031S	Lowndes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT BLACK PRAIRIE WMA FROM HEADWATERS TO CONFLUENCE WITH NORTH BRANCH MAGOWAH CREEK					
SPRING CREEK	MSTB022R00_020	MS022S	Clay	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WESTPOINT FROM HEADWATERS TO TEN-TOM WATERWAY					
SPRING CREEK	MSTB011R00_030	N/A	Clay, Monroe	Aquatic Life Support	Attaining
LOCATION: NEAR VINTON FROM HEADWATERS TO MOUTH AT HANG KETTLE CREEK					
STRAIGHT CREEK	MSTB051R00_020	N/A	Kemper	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT SUCARNOOCHEE CREEK					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
SUCARNOOCHEE CREEK	MSTB051R00_010	N/A	Kemper	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS NEAR KEMPER LAKE TO CONFLUENCE WITH BLACKWATER CREEK					
TALLABINNELA CREEK	MSTB015R00_010	MS015TE	Chickasaw, Monroe	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR POPLAR SPRINGS FROM CONFLUENCE WITH BALL CREEK TO MOUTH AT CHIWAPA CREEK				Secondary Contact	Not Attaining
TALLABINNELA CREEK	MSTB015R00_020	N/A	Chickasaw, Pontotoc	Aquatic Life Support	Attaining
LOCATION: NEAR POPLAR SPRINGS FROM HEADWATERS TO CONFLUENCE WITH BALL CREEK					
TIBBEE CREEK	MSTB022R00_010	MSTIBBEE	Clay, Lowndes	Secondary Contact	Not Attaining
LOCATION: FROM HEADWATERS AT CONFLUENCE OF LINE AND CHUQUATONCHEE CREEKS TO MOUTH AT TEN-TOM WATERWAY					
TOWN CREEK	MSTB022R00_030	MS022T	Clay	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT WEST POINT FROM HEADWATERS TO MOUTH AT TIBBEE CREEK					
TOWN CREEK	MSTB016R00_010	MS016TE	Monroe	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR AMORY FROM CONFLUENCE WITH CHIWAPA CREEK TO CONFLUENCE WITH SHOAF CREEK					
TOWN CREEK	MSTB011R00_010	MS011T	Clay, Monroe	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STRONG FROM HEADWATERS TO MOUTH AT TOMBIGBEE RIVER					
TRIM CANE CREEK	MSTB023R00_010	MS023E	Clay, Oktibbeha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STARKVILLE FROM HEADWATERS TO CONFLUENCE WITH LINE CREEK					

TOMBIGBEE RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
TWENTYMILE CREEK	MSTB003R00_020	MS003T2E	Itawamba, Lee, Prentiss	Aquatic Life Support	Not Attaining
LOCATION: NEAR MANTACHIE FROM HEADWATER TO MOUTH AT TOMBIGBEE RIVER				Secondary Contact	Attaining
WAHALAK CREEK	MSTB041R00_010	MS041E	Kemper, Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WAHALAK FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
WEAVER CREEK	MSTB008R00_010	N/A	Monroe	Aquatic Life Support	Attaining
LOCATION: NEAR BECKER FROM HEADWATERS TO MOUTH AT TEN-TOM WATERWAY					
WET WATER CREEK	MSTB038R00_030	MS038WW	Lowndes, Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BROOKSVILLE FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					
WOLF CREEK	MSTB009R00_020	N/A	Monroe	Aquatic Life Support	Attaining
LOCATION: NEAR ABERDEEN FROM HEADWATERS TO MOUTH AT MATTUBY CREEK					
WOODWARD CREEK	MSTB043R00_010	MS043E	Noxubee	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR COOKSVILLE FROM HEADWATERS TO AL STATE LINE					
YELLOW CREEK	MSTB027R00_010	MS027E	Lowndes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR STEENS FROM AL STATE LINE TO CONFLUENCE WITH LUXAPALILA CREEK					
YELLOW CREEK	MSTB037R00_010	MS037Y	Noxubee, Winston	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BETHDEN FROM HEADWATERS TO MOUTH AT NOXUBEE RIVER					

YAZOO RIVER BASIN

Basin Description

The Yazoo River Basin is located in the northwestern and west central part of Mississippi. The basin, Mississippi's largest, covers 13,355 square miles in 30 counties (Figure 94). The basin is about 200 miles long with a maximum width of approximately 100 miles and eventually drains via the Yazoo River into the Mississippi River near

Vicksburg, Mississippi. The Yazoo River Basin has approximately 24,554 miles of rivers and streams. The Yazoo River itself begins in Leflore County, Mississippi from the convergence of its main headwater tributaries of the Tallahatchie River and the Yalobusha River. Major rivers in the basin include the Coldwater, Little Tallahatchie, Tallahatchie, Yocona, Yalobusha, Big Sunflower, and Yazoo Rivers. Other major water features in the basin include four large flood control reservoirs that create recreational opportunities and provide quality of life benefits. For Mississippi's Basin Management Approach and §305(b) assessment purposes, the Mississippi River Basin above the city of Vicksburg is included in this section.



Figure 94: Yazoo River Basin (MDEQ)

The Delta portion of the Yazoo River Basin is one of the most noticeable geographic features in the state and is part of the alluvial plain of the Mississippi River. The Mississippi Alluvial Plain (MAP) encompasses the land on both banks of the Mississippi River in six states and represents the original floodplain of the Mississippi River. The part of the MAP system that lies within Mississippi extends the entire length of the state. Just south of Memphis, the plain fans out to encompass all of the land between the Mississippi and Yazoo Rivers. This fan-shaped area is commonly known as the Delta and is one of two distinct regions of the Yazoo River Basin. The other is the "Bluff Hills" or uplands portion, located on the eastern and northeastern parts of the basin. The land was naturally covered in thick forests and swamps, but over the last two centuries,

man has cleared most of the forests and drained the majority of the swamps, leaving a vast open country of rich farm land (approximately 7,000 square miles). The Yazoo River Basin is now essentially separated from the Mississippi River by an extensive man-made levee system running the entire length of the western side of the basin designed to prevent major flood events. The only outlet to the Mississippi River for the basin is the Yazoo River mainstem mouth at Vicksburg in central Mississippi.

The Yazoo River Basin includes a hilly upland in north and north-central Mississippi, where its headwater tributaries originate, and an extensive flat lowland area in north and west Mississippi. The sparsely populated upland area is located primarily in the Mississippi Valley Loess Hills and Plains Region, and is commonly known as the Bluff Hills. Oak and hickory forestland, gently rolling hills and plains, and a thick, highly erosive loess soil (sometimes over 60 ft. thick) are key natural characteristics of this region. This area has been described as one of the most erosive regions in the world. Major cities in this region include Grenada, Batesville, Oxford, Holly Springs, and New Albany.

The flat lowland area in northwest Mississippi located in the MAP Region, and known as the Delta, is recognized for containing some of the most fertile and productive farmland in the world. This region is mostly a flat, broad, floodplain. River terraces and levees provide the main topographic relief. Because the natural elevation gradient is only one foot per mile, streams in this region tend to be sluggish and have poorly-defined channels. Land in the Delta is mainly comprised of alluvial deposits of sand and clay deposited by the ancestral Mississippi and Ohio Rivers. The deep soils tend to have low permeability and poor drainage. Historically, the land has been used for row crops and most of the streams were channelized to improve drainage. The Yazoo River Basin has relatively few areas with large scale development in this vast agriculturally-dominated basin and these are found around its few urban population centers of Greenville, Indianola, Greenwood, Cleveland, Clarksdale, and Tunica. One area experiencing increasing urban growth in recent years is the Tunica area located in the northwestern part of the basin near Tennessee. This is due to the explosive growth of the casino industry along the Mississippi River in this area of the state.

The Yazoo River Basin, with an estimated population of ~625,524 (2000 Census), encompasses approximately one-fifth of Mississippi's population. This area is predominantly rural with an average population density of around 45 people per square mile. Within the basin, greater population densities are found in the eastern (Bluff Hills) and northern (Memphis outgrowth) parts of the basin. Within the Delta, the greatest concentrations of people are associated with the cities of Clarksdale, Cleveland, and Indianola.

Land Use

From the taming of the floodwaters of the Mississippi River through the construction of levees and flood control reservoirs to the conversion of the vast bottomland hardwood forests into croplands and fish farms, the Yazoo River Basin has been significantly altered over time. In fact, the Delta region of the Yazoo River Basin has been altered more by human activity than any other area of the state. Exposure of the erosive soils of

the Bluff Hills region by human activity has also been significant.

The distribution of major land uses within the basin can be directly correlated to the basin's regional boundaries.

Cropland production, hosted by the fertile soils of the Delta region, and wetlands dominate land use in the western portion of the basin, while the varied topography and soils of the Bluff Hills region host diverse land uses in the eastern part of the basin (Figure 95).

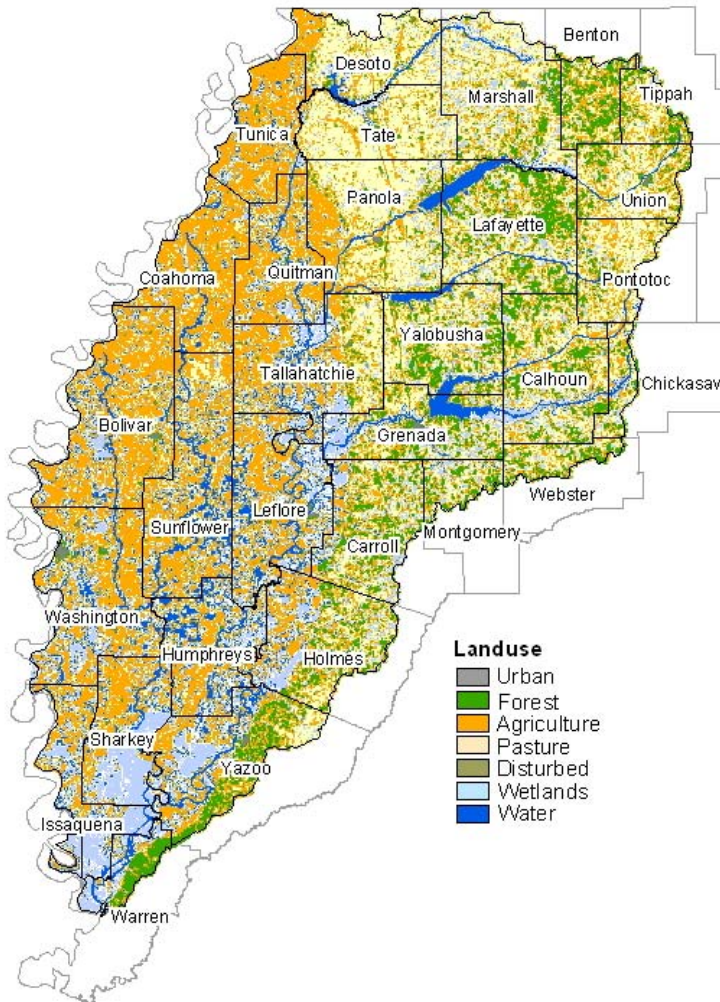


Figure 95: Major Land Use in the Yazoo River Basin (MARIS)

Land cover is dominated by *agriculture* (Figure 96), with 40 percent of the basin used for cropland and 19 percent for pasture. Natural *forest* and *wetlands* comprise 29 percent of the basin. *Urban* uses (i.e., towns and cities) make up only 1 percent of the basin area. However, one of the fastest growing urban areas of the state is in the northern portion of the basin which is a suburb of Memphis, TN. *Disturbed areas* (strip mines, gravel pits, sandy areas, barren, and transitional areas) make up the remaining 8% of the land use in the basin.

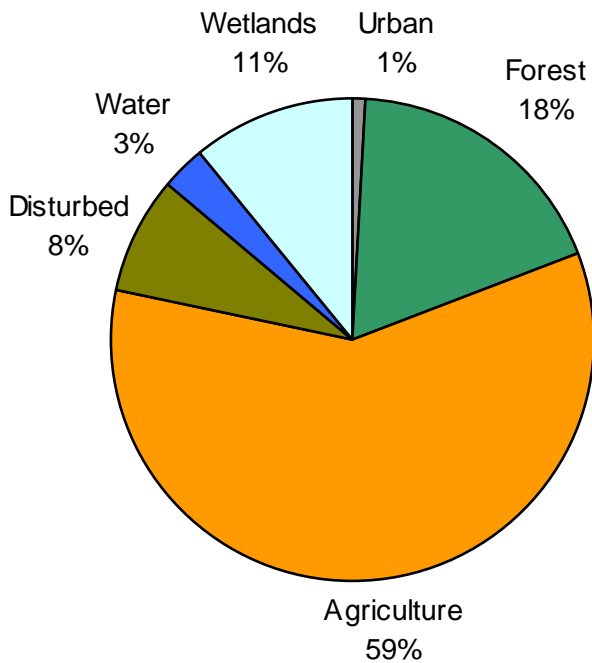


Figure 96: Distribution of Land Cover in the Yazoo River Basin (MARIS)

Water Resources

The Yazoo River Basin in Mississippi has approximately 22,554 miles of perennial and intermittent rivers and streams. According to the state's water quality standards, the Yazoo River and most of its tributaries are classified as Fish and Wildlife streams. One water body, the Little Tallahatchie River below Sardis Reservoir, is classified as Recreation in the basin. In addition, several small ditches and drainage canals in the basin located primarily below point source discharges are specifically identified and classified as Ephemeral in the state's WQS.

Streams in the upland portion of the Yazoo River Basin tend to be deeply incised and generally unstable. These streams tend to have straight and wide channel beds composed of either sand, sand and gravel, or cohesive clay, shallow depths with little discharge, and steep banks prone to failure. Streams in the Delta portion are typically sluggish due to the limited slope, are very turbid most of the time due to sediment runoff and have silt bottoms. Many stream channels have been straightened to facilitate drainage.

Abundant reservoirs and lakes can be found in the Yazoo River Basin. In fact, eight of the eleven largest reservoirs and lakes in the state are located in the basin. These lakes are significant natural and recreational resources. The largest water bodies are the four flood control reservoirs operated by the USACE: Sardis, Grenada, Arkabutla, and Enid. Although designed for flood control, these reservoirs are used extensively for recreation and are classified as such in the state's WQS. Other public reservoirs and lakes found in this basin that are classified for Recreation are Chewalla Reservoir, Lake Dumas, Lake Washington, Moon Lake, Tillatoba Lake, and Spring Lake at Wall Doxey State Park. Some other major lakes in the Yazoo Basin and the associated portion of the Mississippi River Basin include Lake Bolivar, Desoto Lake, Eagle Lake, Bee Lake, Dump Lake, Lake Bolivar, Wasp Lake, Tunica Lake, and Tchula Lake.

In terms of biological resources, the Yazoo River Basin has 2 federally threatened and 4 federally endangered species. This basin also includes two water bodies, Coldwater River and Tippah River, proposed for review as potential Mississippi Natural and Scenic Waterways System water bodies.

Surface Water Assessment

Designated Use Support

The assessments for the Yazoo River Basin were made based on data from 178 sampling locations in streams and rivers across the basin sampled by MDEQ as part of the §303(d)/IBI wadeable streams project and the §303(d) fecal coliform monitoring project (Figure 97). The perennial streams where the monitoring stations were located represented the mainstem drainage for each 11-digit watershed in the basin. All of these streams are located in the Bluff Hills area of the basin. The Delta region or Mississippi Alluvial Plain was not monitored as part of the M-BISQ Project due to the unique geomorphological and land use/land cover characteristics of this area. Use support status for the basin is presented and summarized in this report with causes and sources of impairment.

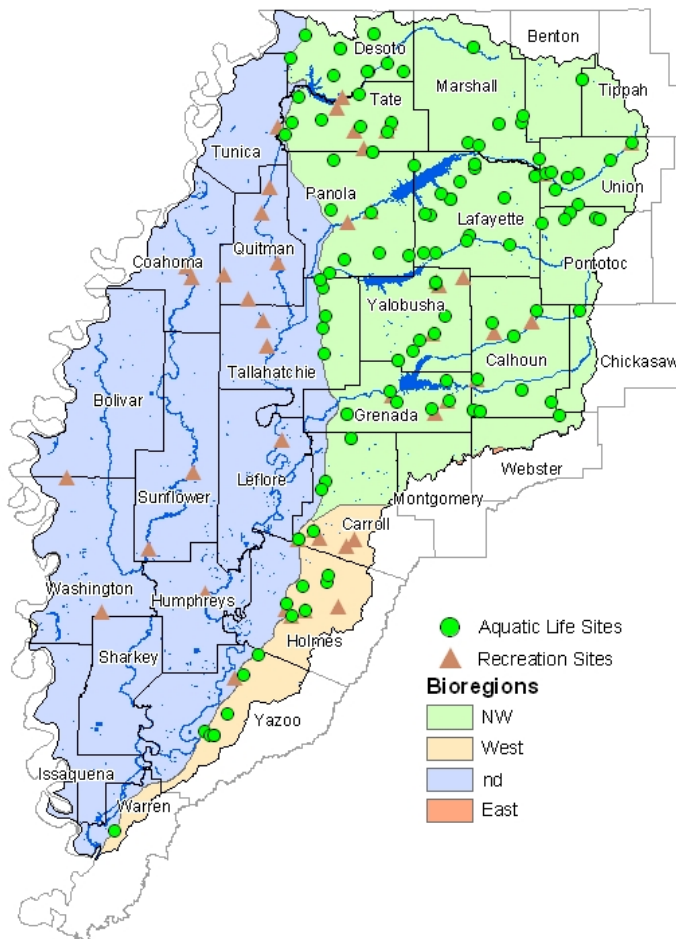


Figure 97: Yazoo River Basin Monitoring Stations and M-BISQ Bioregions

MDEQ assessed approximately 18% (1,611 miles) of the total 9,000 perennial miles of streams and rivers in the Yazoo River Basin. The status of water quality on the remaining 82% (7,389 miles) of the basin's perennial rivers and streams is unknown. In addition, the majority of stream miles (63%) in the Yazoo River Basin is composed of intermittent streams and therefore is not readily assessable. Monitoring for the 2004 §305(b) assessment consisted of biological community surveys in the Bluff Hills portion of the basin as part of Mississippi's M-BISQ project. Waters in the Delta were excluded from this monitoring effort. This factor also contributed to a lower percentage of monitored waters in the Yazoo River Basin. There are special monitoring efforts ongoing to determine the appropriate biological indicator for the Delta region of Mississippi. When this pilot project is completed, the results will be used to formulate a monitoring plan for the Mississippi Delta. A summary of use support for the basin's assessed rivers and streams is found in Table 41 and Figure 98. For water bodies with multiple assessed uses, the EPA Assessment Database (ADB) summary under represents the actual amount of attaining mileage assessed. For water bodies with multiple uses assessed, the ADB automatically assigns the water body mileages according to the Integrated Reporting category system. This categorization system assigns a water body to only one of five categories:

Category 1: Attaining all uses

Category 2: Attaining some uses but insufficient information for assessment of other uses

Category 3: Insufficient information to assess any use

Category 4: Not attaining a use but a TMDL is not necessary

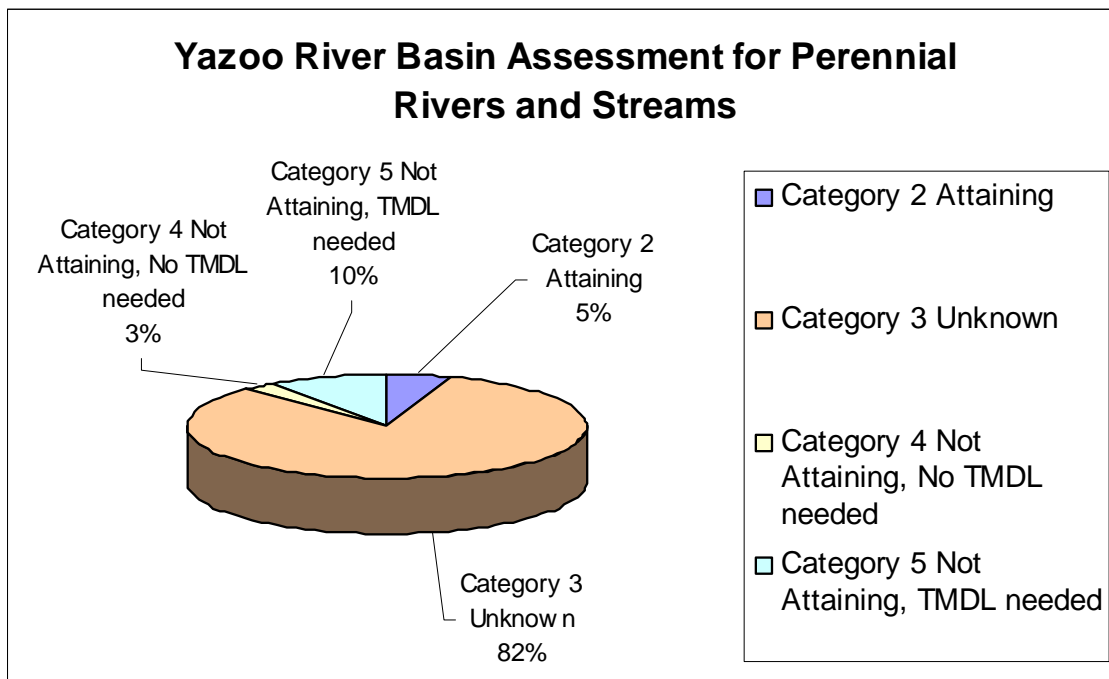
Category 5: Not attaining a use and a TMDL is needed

EPA defines a Category 1 water as having sufficient data to prove there is no impairment for any potential designated use of that water body. Due to EPA requirements for Category 1 that all uses are assessed, Mississippi currently has no water bodies assigned to Category 1. If a water body is attaining one use but is not attaining another use, it is assigned to one of the not attaining categories (Category 4 or 5). Therefore, the amounts of waters attaining a designated use are under represented in the following table.

Of the assessed stream and river miles in the Yazoo River Basin, approximately 5% are in category 2 for attaining some uses but unknown for remaining water body uses, and 3% are in category 4 as not attaining one or more designated uses but a TMDL is not necessary. Waters in category 5 as not attaining and needing a TMDL make up 10% of the assessed water bodies. The status of the remaining 82% of water bodies in the Yazoo River Basin is unknown and these waters are reflected in category 3. Of the 884 miles of waters in category 5, 74% (657 miles) are assessed as being biologically impaired. Stressor Identification studies will be conducted to determine the actual cause and source of the impairment for these waters. Waters in category 5 can be found listed in Section A (Water Bodies with Monitoring Data) in the Yazoo River Basin section of the 2004 §303(d) list. Please refer to Table 45 at the end of the Yazoo River Basin section for a tabular listing of all assessments. This table also provides the necessary information to cross-reference the §305(b) assessments with the §303(d) list.

Table 41: Summary of Yazoo River Basin Use Support Assessments-Rivers and Streams

Degree of Use Support	Total Size in Miles
Category 1: Attaining All Uses	
Category 2: Attaining Some Uses but Unknown for Other Uses	484
Category 3: Unknown/Insufficient Data for Assessment	22,943
Intermittent Miles	15,554
Perennial Miles	7,389
Category 4: Not Attaining – No TMDL Needed	243
A. TMDL Completed	243
B. Impairment Caused by Pollution	0
C. Expected to Attain Use before Next Assessment	0
Category 5: Not Attaining – TMDL Needed	884
A. Pollutant Identified	227
B. Biological Impairment- Cause Unknown	657
Total Miles	24,554

**Figure 98: Yazoo River Basin Assessment of Perennial Rivers and Streams**

Causes and Sources of Impairment of Designated Uses

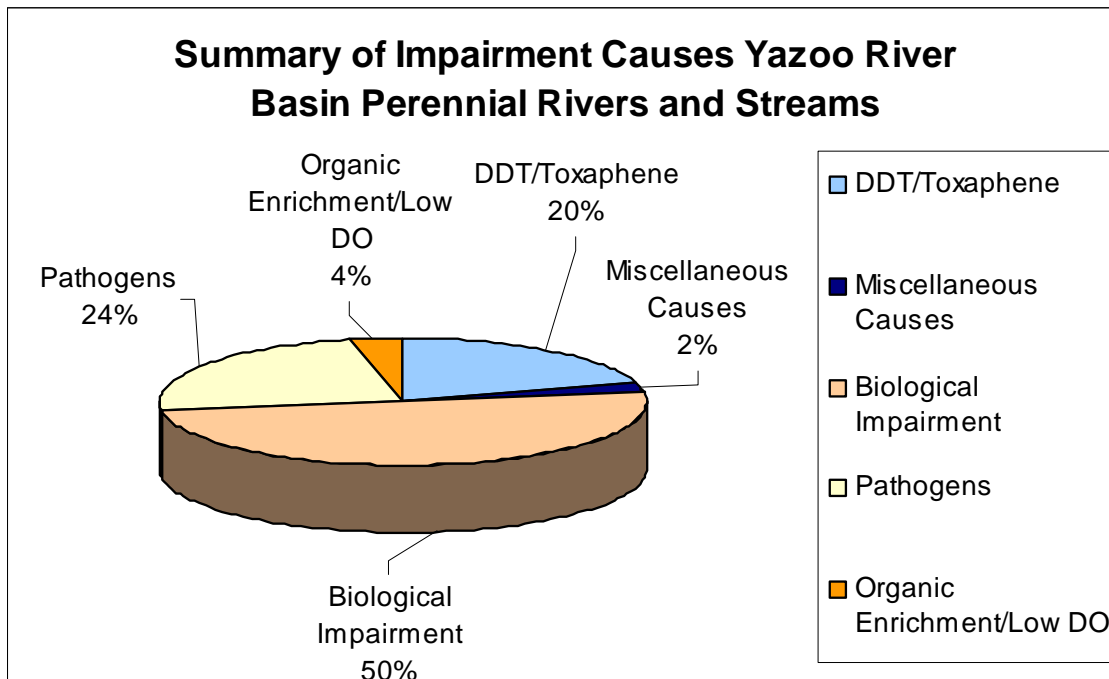
Causes and sources of impairment were determined for streams and rivers having one or more uses impaired. Total assessed lengths of streams and rivers affected by various cause categories are given in Table 42 and Figure 99. For the majority of miles of assessed rivers that do not meet their designated uses, impairment is caused by unknown pollutants or other factors contributing to biological impairment. In these cases, actual monitoring has detected biological impairment but the exact pollutant cause has yet to be determined. For these impaired waters, the next step in the state's water quality management process will be to conduct stressor identification analyses to identify the stressor(s) causing the impairment. Once the stressor(s) are identified, the Total Maximum Daily Load (TMDL) process where applicable can proceed. For stressors identified that are not appropriate for the development of a TMDL, other water quality management actions will be needed. Other causes of impairment noted in the Yazoo River Basin are from pathogens, mercury, PCBs, DDT, and toxaphene. The sources of pathogen and biological impairments for waters assessed in the basin are unknown. As stated above, the majority of impairment was determined to be biological and sources of the impairment are yet to be determined. Other sources of impairment include atmospheric deposition for mercury, runoff from industrial sites for the PCB's, and historical agricultural runoff of DDT and toxaphene that resulted in resuspension of these pesticides in contaminated sediments.

Table 42: Summary of Impairment Causes-Yazoo River Basin

Cause Categories	Total Miles
Biological Impairment*	692
Pathogens	327
DDT/Toxaphene	282
Organic Enrichment/Low DO	51
PCB's**	11
Salinity/TDS/Chlorides**	5
Mercury**	17
Total	1,385

*Definitive cause identification is not possible at the time of assessment. Category applies to waters where biological indicators (macroinvertebrates) were used and impairment was indicated but further investigation needed to quantify pollutant.

**Pollutants grouped into Miscellaneous Causes category in chart.

**Figure 99: Summary of Impairment Causes for Perennial Rivers and Streams-Yazoo River Basin**

Aquatic Life Use Support

As stated earlier, all of the Aquatic Life Use Support assessments were based on biological monitoring data collected as part of the development of Mississippi's IBI process, M-BISQ. Of the Yazoo River Basin's assessed stream and river miles, approximately 254 miles of perennial rivers and streams are attaining their aquatic life use, while 741 miles were assessed as not attaining and are considered impaired (Table 43 and Figure 100). All of the non-attainment assessments are contributed to biological impairment and stressor identification studies are pending to determine the actual pollutant(s) contributing to the impairment. Figures 101-104 depict geo-referenced coverages of the Aquatic Life Use Support assessments for the Yazoo River Basin.

Table 43: Aquatic Life Use Support-Yazoo River Basin

Status	Miles
Attaining	254
Unknown	8,005
Total Not Attaining	741
TMDL not needed	60
TMDL needed	681
Total	9,000

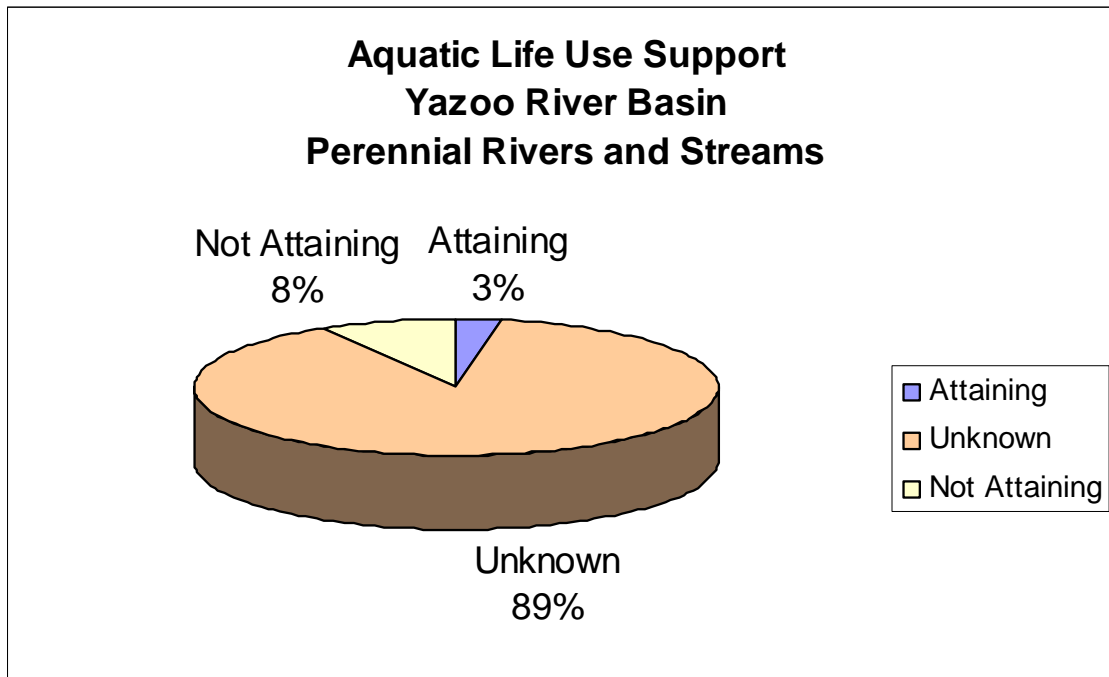


Figure 100: Aquatic Life Use Support-Yazoo River Basin

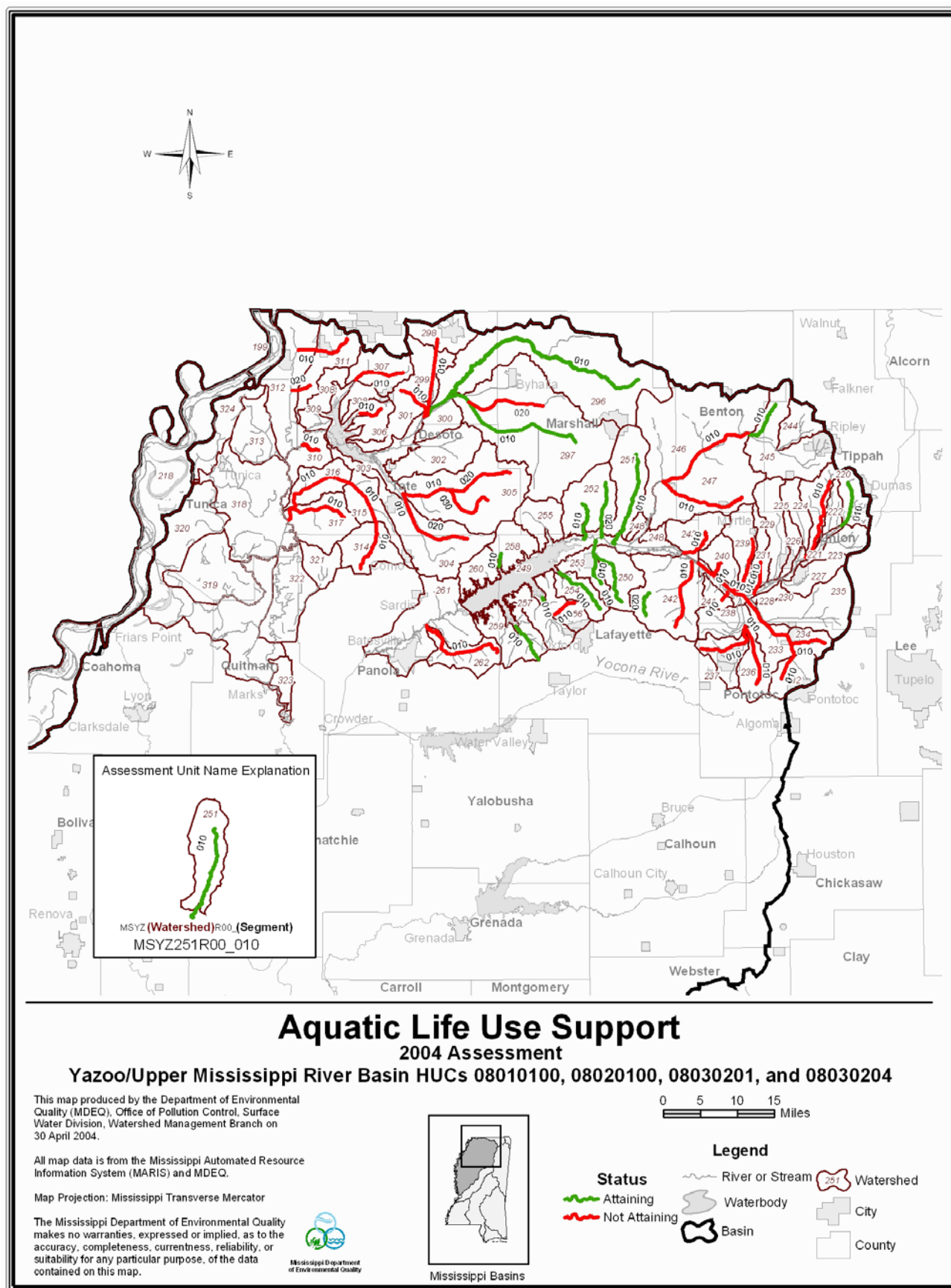


Figure 101: Aquatic Life Use Support Map-Upper Yazoo River Basin

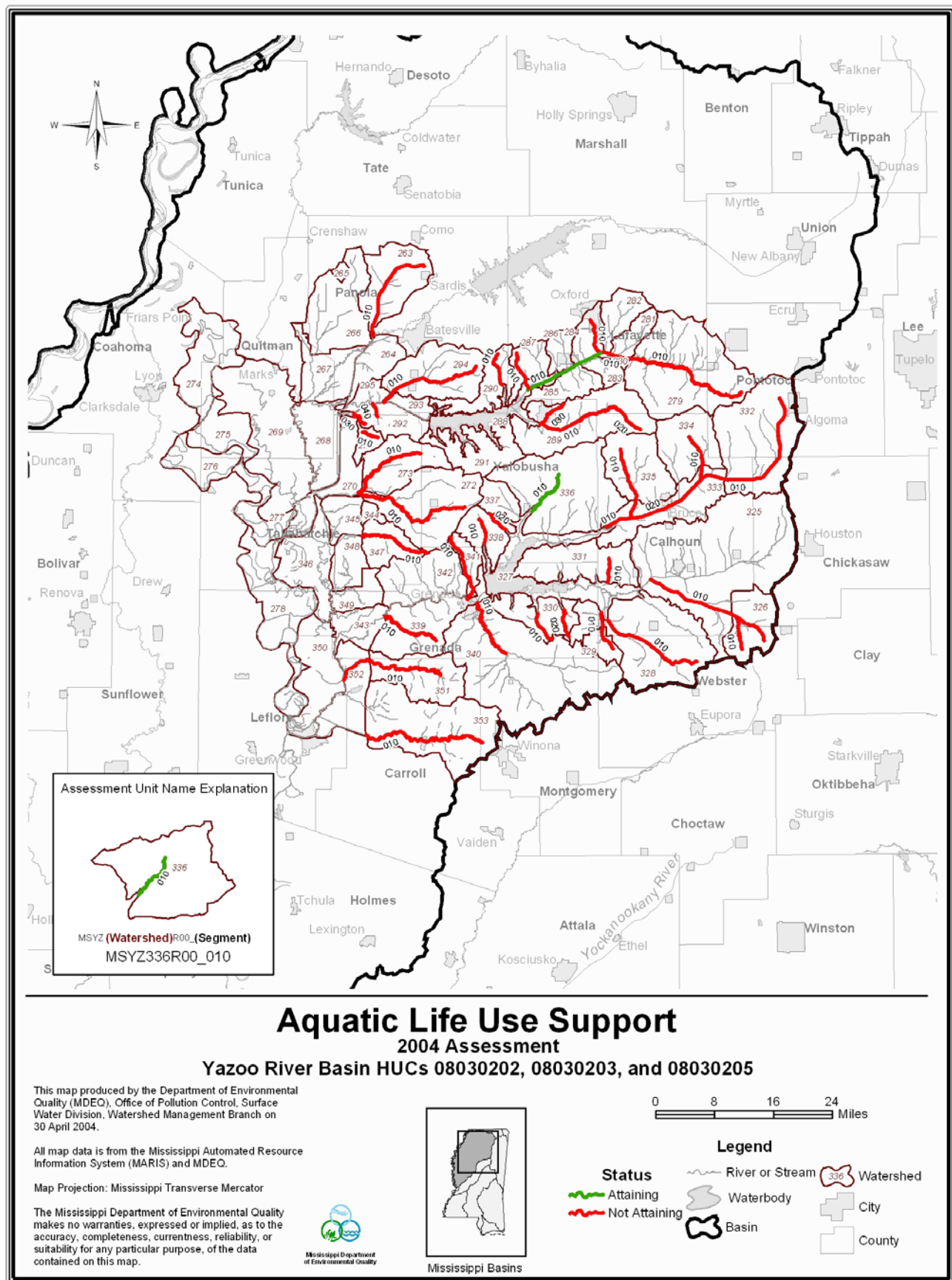


Figure 102: Aquatic Life Use Support Map-Eastern Yazoo River Basin

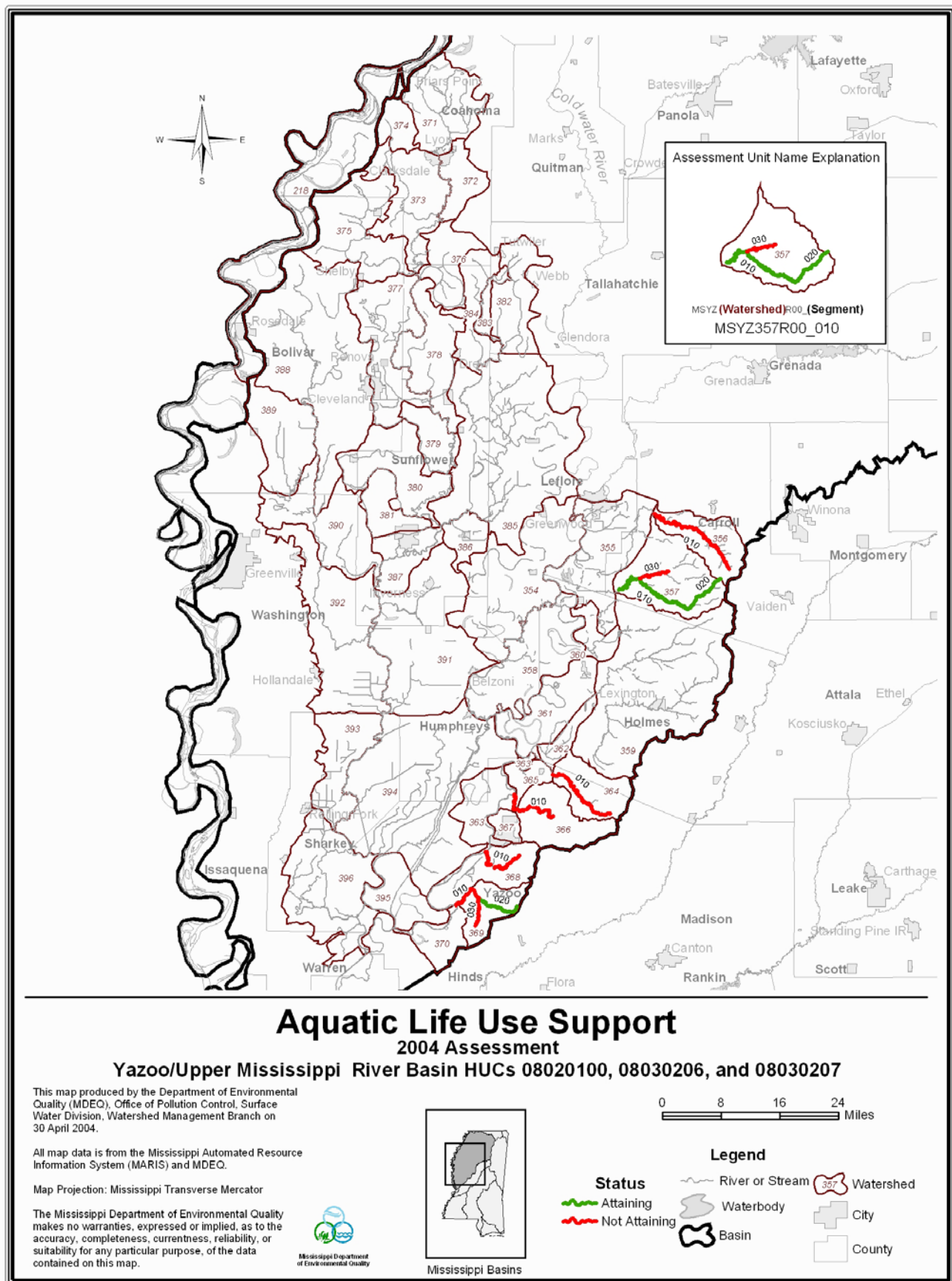


Figure 103: Aquatic Life Use Support Map-Middle Yazoo River Basin

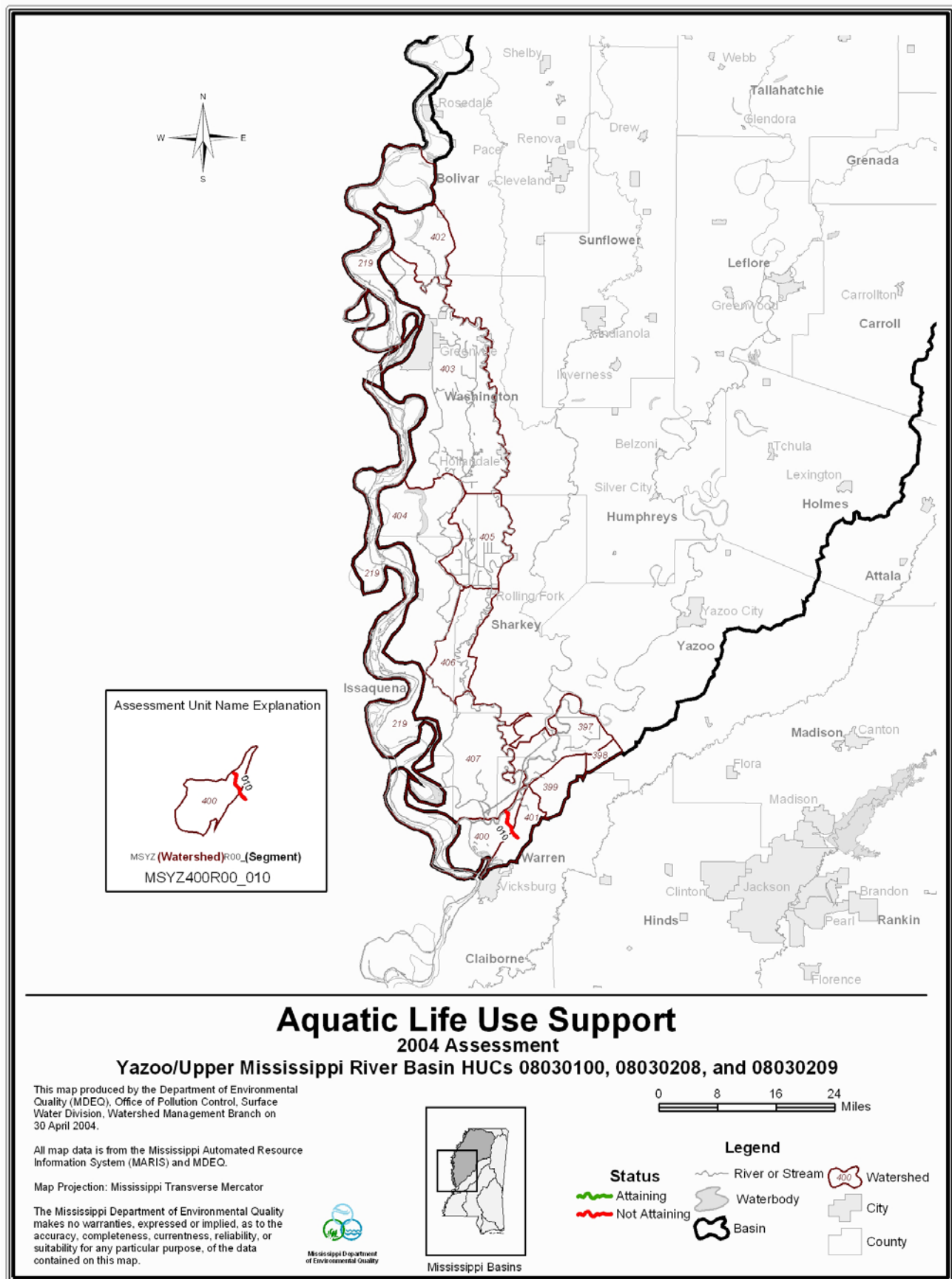


Figure 104: Aquatic Life Use Support Map-Lower Yazoo River Basin

Recreation Use Support

Data collected as part a statewide §303(d) fecal coliform monitoring project were used to make the Recreation Use Support assessments. Of the Yazoo River Basin's assessed stream and river miles, approximately 474 miles of perennial rivers and streams are attaining their recreation use, while 327 miles were assessed as not attaining and are considered impaired (Table 44 and Figure 105). Figures 106-109 depict geo-referenced coverages of the Recreation Use Support assessments for the Yazoo River Basin.

Table 44: Recreation Use Support-Yazoo River Basin

Status	Miles
Attaining	474
Unknown	8,199
Total Not Attaining	327
TMDL not needed	247
TMDL needed	80
Total	9,000

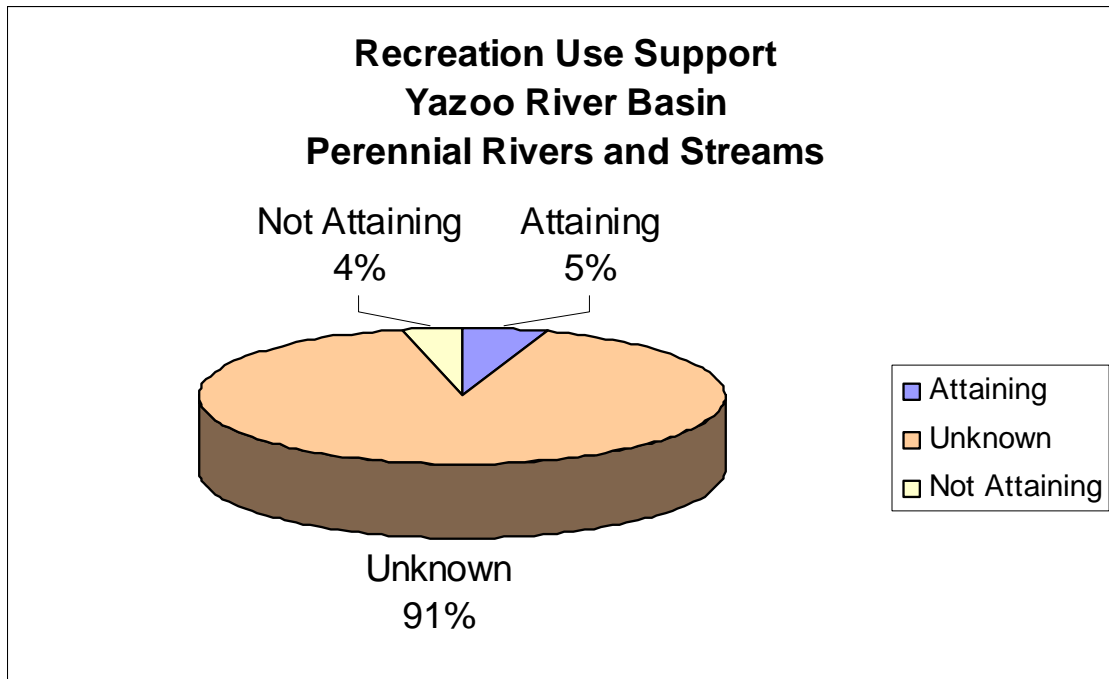


Figure 105: Recreation Use Support-Yazoo River Basin

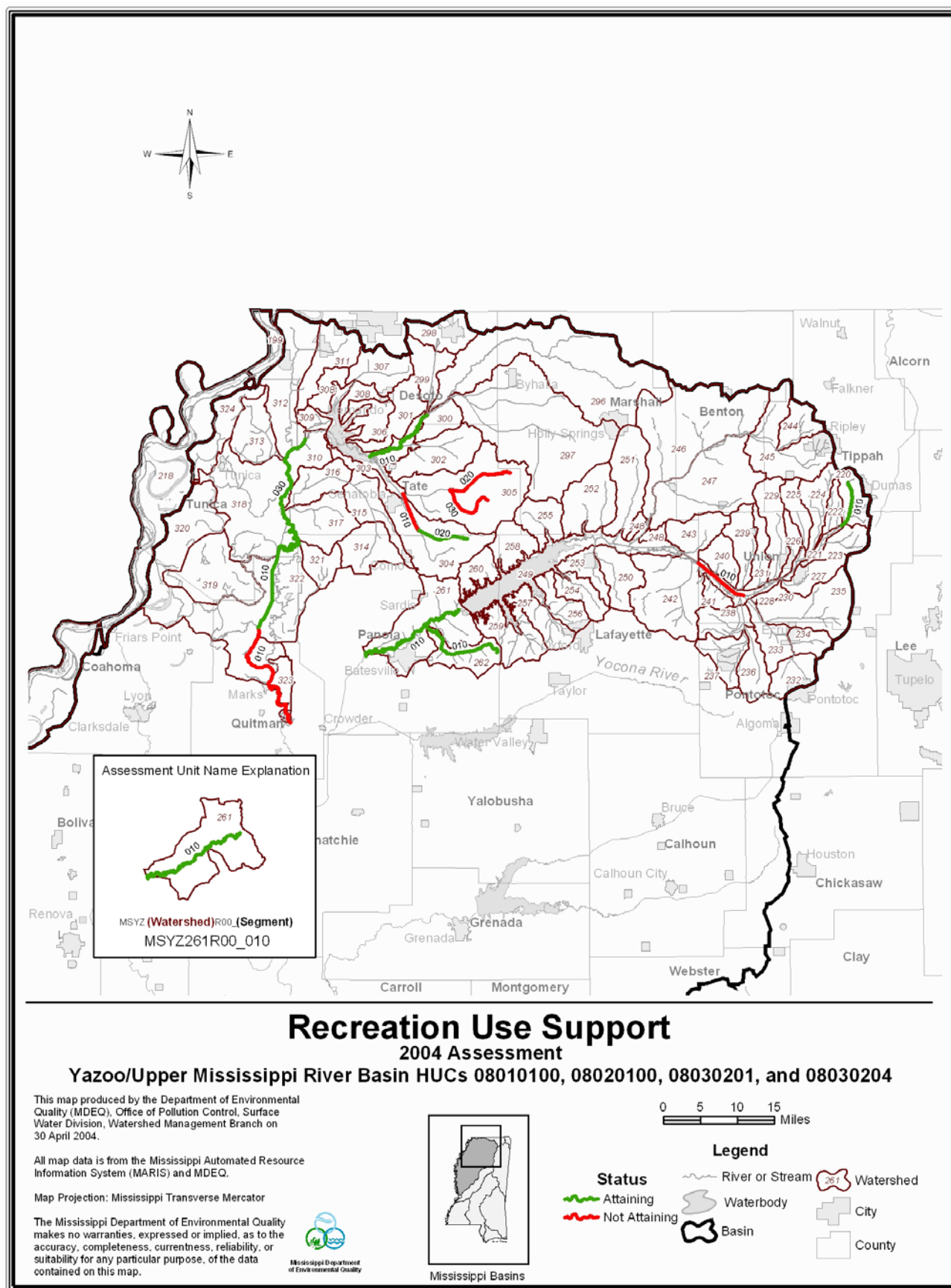


Figure 106: Recreation Use Support Map-Upper Yazoo River Basin

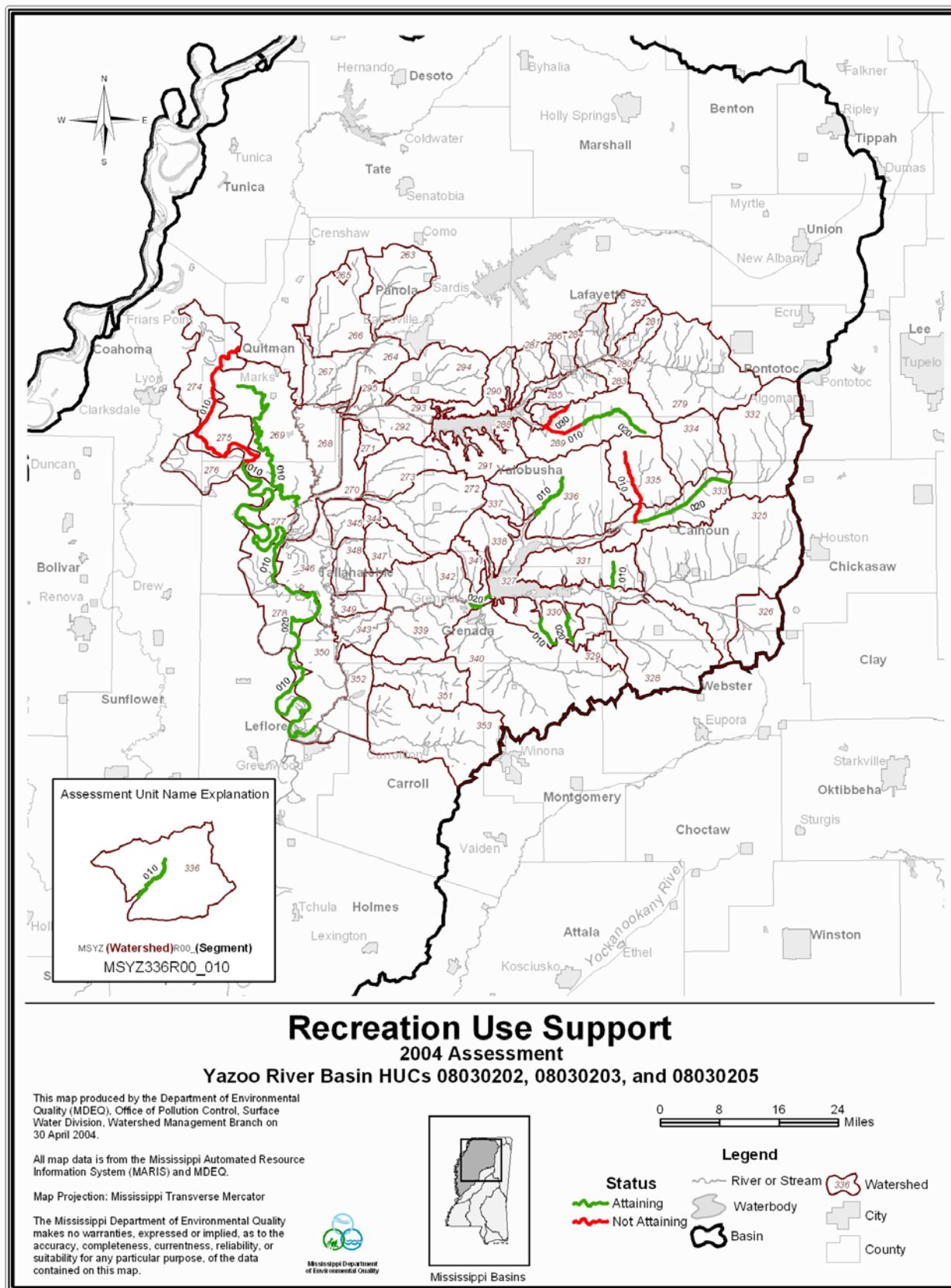


Figure 107: Recreation Use Support Map-Eastern Yazoo River Basin

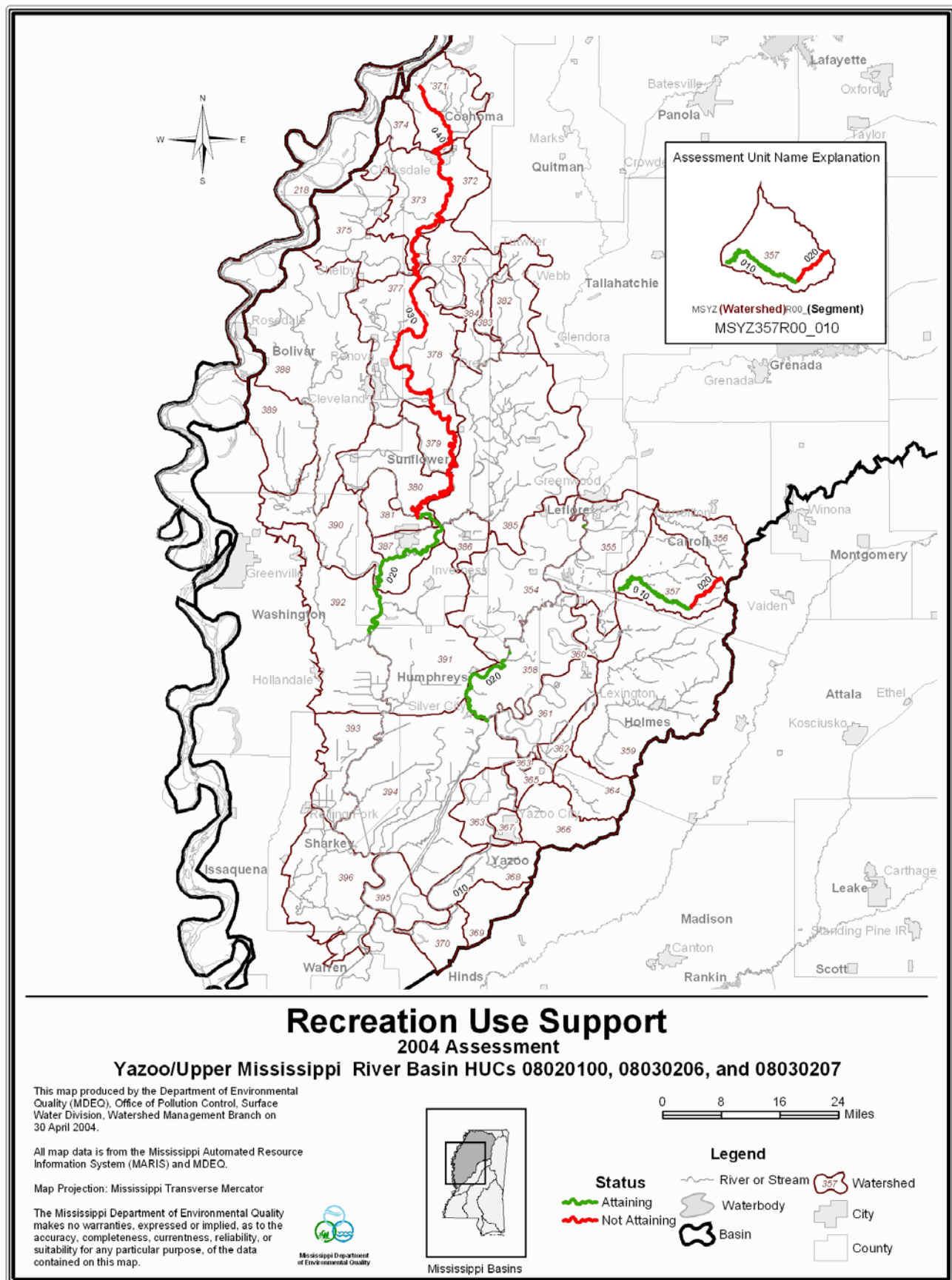


Figure 108: Recreation Use Support Map-Middle Yazoo River Basin

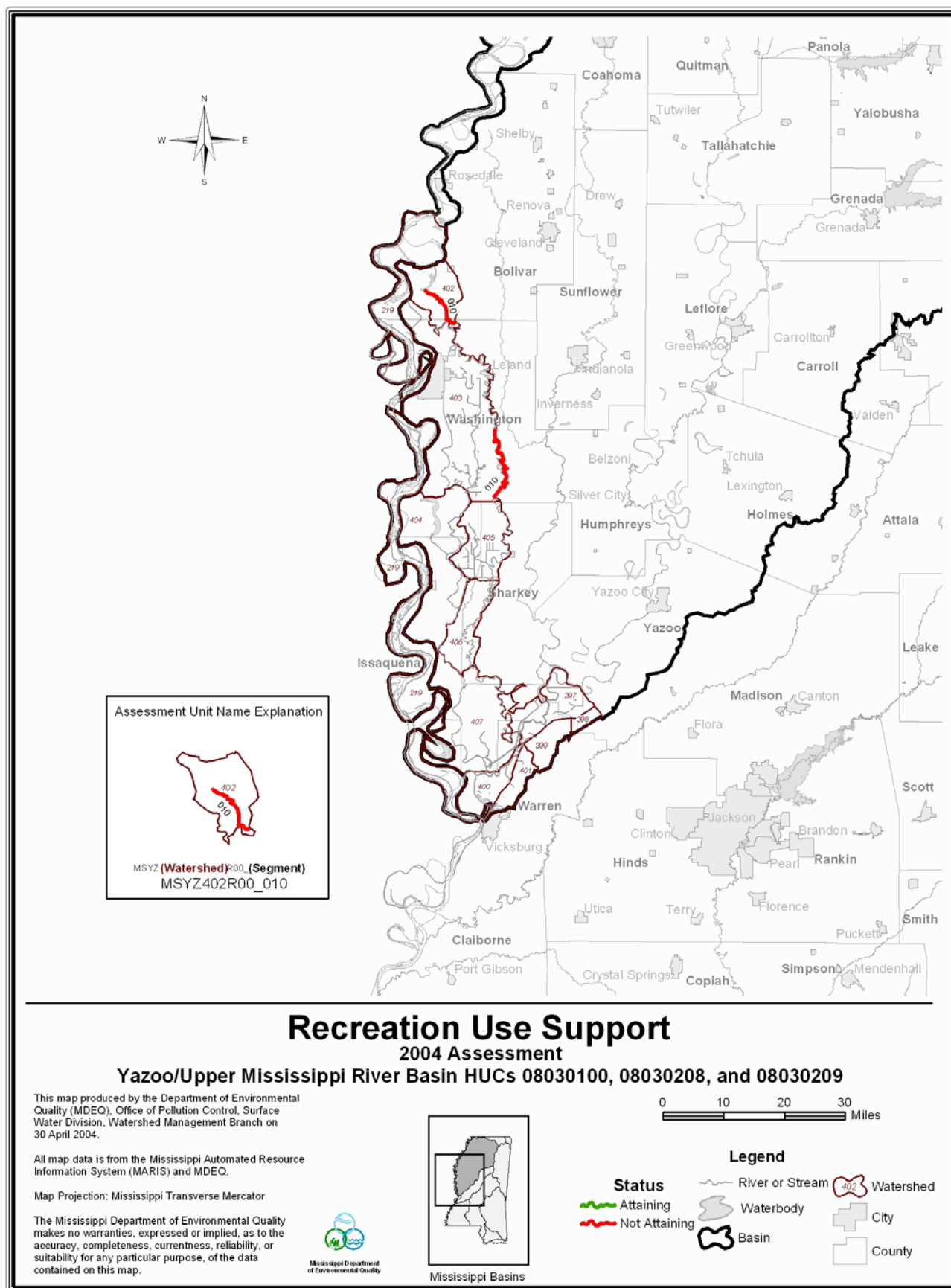


Figure 109: Recreation Use Support Map-Lower Yazoo River Basin

Fish Consumption Use Support

Data collected and analyzed as part of MDEQ's fish tissue monitoring program were used to make the Fish Consumption Use Support assessments. Currently, fish consumption advisories are present on seven specific water bodies in the Yazoo River Basin. Waters covered by these advisories include Lake Susie, Enid Reservoir, Grenada Lake, Roebuck Lake, Yazoo National Wildlife Refuge waters, and portions of Yalobusha and Yocona Rivers. A fish consumption advisory related to DDT and toxaphene is present on all waters in the Mississippi Delta (Figure 110). However, this advisory does not affect waters inside the mainline levee system of the Mississippi River. Approximately 206 miles of perennial rivers and streams are not attaining their fish consumption use and are considered impaired. These impairments are attributed to the presence of mercury, PCB's, DDT, and toxaphene in fish tissue. For more information on fish advisories, refer to Part III, Public Health Concerns and Advisories, of the 2004 §305(b) report.

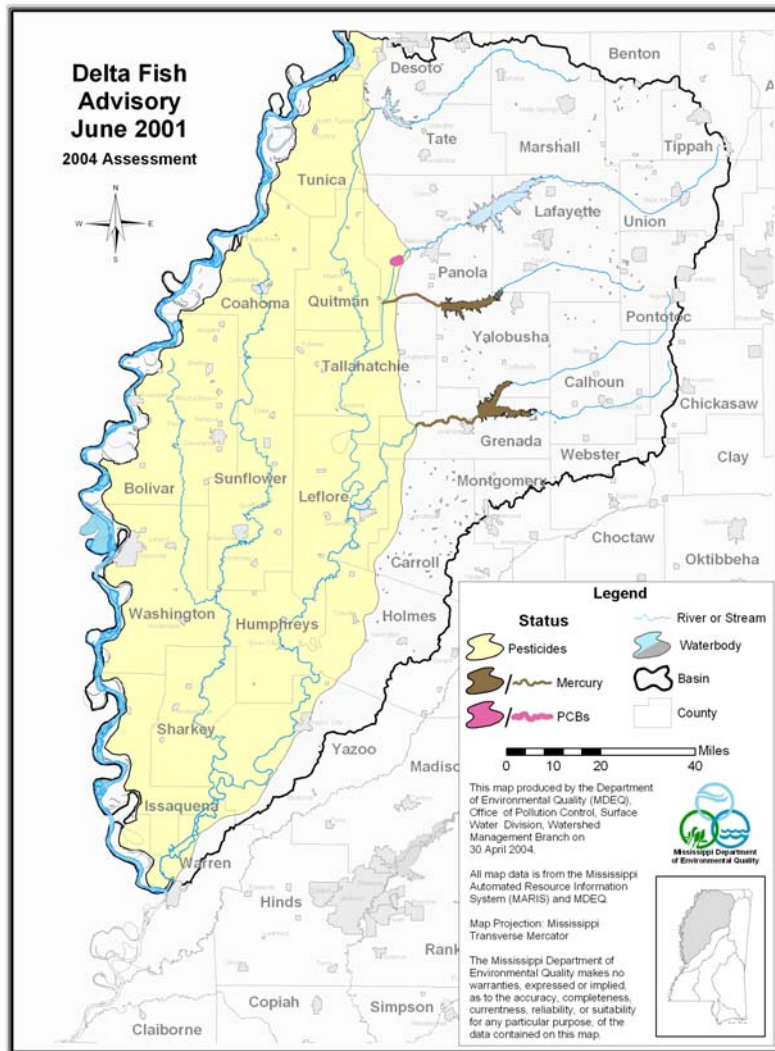


Figure 110: Advisory area for the Delta Region of Mississippi

Table 45: 2004 §305(b) Assessed Water Bodies-Yazoo River Basin

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
ABIACA CREEK	MSYZ357R00_010	N/A	Carroll	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH MURDOCK CREEK TO WATERSHED 357 BOUNDARY				Secondary Contact	Attaining
ABIACA CREEK	MSYZ357R00_020	MS357M1	Carroll	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH MURDOCK CREEK				Secondary Contact	Not Attaining, TMDL Completed
ARKABUTLA CREEK	MSYZ314R00_010	MS316E	Panola, Tate	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO WATERSHED 315 BOUNDARY					
ARKABUTLA CREEK	MSYZ315R00_010	MS316E	Tate	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM WATERSHED 314 BOUNDARY TO WATERSHED 316 BOUNDARY					
ARKABUTLA CREEK	MSYZ316R00_010	MS316E	Tate	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM WATERSHED 315 BOUNDARY TO MOUTH AT COLDWATER RIVER					
ASCALMORE CREEK	MSYZ347R00_010	MS347E	Grenada, Tallahatchie	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT PAYNES FROM HEADWATERS TO CONFLUENCE WITH ASCALMORE CANAL					
BATUPAN BOGUE	MSYZ340R00_010	MS340E	Grenada	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GRENADA FROM CONFLUENCE OF LITTLE BOGUE AND BIG BOGUE TO MOUTH AT YALOBUSHA RIVER					
BERRY BRANCH	MSYZ256R00_010	MS256B	Lafayette	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR OXFORD FROM HEADWATERS TO MOUTH AT TOBY TUBBY CREEK					

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BIG SAND CREEK	MSYZ353R00_010	MS353BE	Carroll, Montgomery	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT CARROLTON FROM HEADWATERS TO WATERSHED 352 BOUNDARY					
BIG SPRING CREEK	MSYZ251R00_010	N/A	Marshall	Aquatic Life Support	Attaining
LOCATION: AT POTTS CAMP FROM HEADWATERS TO MOUTH AT TIPPAAH RIVER					
BIG SUNFLOWER RIVER	MSYZ395RX0_030	MSBIGSUNRM	Bolivar, Coahoma, Sunflower	Secondary Contact	Not Attaining, TMDL Completed
LOCATION: FROM CONFLUENCE WITH HARRIS BAYOU TO CONFLUENCE WITH PORTER BAYOU					
BIG SUNFLOWER RIVER	MSYZ395RX0_020	N/A	Humphreys, Washington	Secondary Contact	Attaining
LOCATION: FROM CONFLUENCE WITH PORTER BAYOU TO CONFLUENCE WITH BOGUE PHALIA					
BIG SUNFLOWER RIVER	MSYZ395RX0_040	MSBIGSUNRM	Coahoma	Secondary Contact	Not Attaining, TMDL Completed
LOCATION: FROM HUC BOUNDARY 08030207 TO CONFLUENCE WITH HARRIS BAYOU					
BLACK CREEK	MSYZ359R00_030	MS359M3	Holmes	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH SHIPP CREEK TO WATERSHED 362 BOUNDARY				Secondary Contact	Not Attaining, TMDL Completed
BLACK CREEK	MSYZ359R00_040	N/A	Holmes	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH SHIPP CREEK				Secondary Contact	Attaining
BLISS CREEK	MSYZ400R00_010	MS400B	Warren	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR REDWOOD FROM HEADWATERS TO MOUTH AT YAZOO RIVER					

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
BOPHUMPA CREEK	MSYZ359R00_020	N/A	Holmes	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT FANNEGUSHA CREEK					
BUNTYN CREEK	MSYZ271R00_010	MS271E	Tallahatchie	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TEASDALE FROM HEADWATERS TO LAKE MARTHA					
BURNEY BRANCH	MSYZ284R00_010	MS284E1	Lafayette	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT BURNEY BRANCH FROM HEADWATERS TO MOUTH AT YOCONA RIVER					
BUTPUTTER CREEK	MSYZ330R00_020	MS330BE	Grenada	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GRENADA FROM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL				Secondary Contact	Attaining
BYNUM CREEK	MSYZ290R00_010	MS290E	Panola	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WATER VALLEY FROM HEADWATERS TO MOUTH AT ENID LAKE FLOOD POOL					
CAMP CREEK	MSYZ299R00_010	MS299E	Desoto	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ALPHABA FROM HEADWATERS TO MOUTH AT COLDWATER RIVER					
CANE CREEK	MSYZ224R00_010	MS224E	Tippah, Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR NORTH HAVEN FROM HEADWATERS TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
CANE CREEK	MSYZ339R00_010	MS339M3	Grenada	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HOLCOMB FROM HEADWATERS TO HOLCOMB POTW OUTFALL					

YAZOO RIVER						
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS	
CASSIDY BAYOU	MSYZ275R00_010	MS275E	Coahoma, Quitman, Tallahatchie	Secondary Contact	Not Attaining	
LOCATION: NEAR TUTWILLER FROM WATERSHED 274 BOUNDARY TO MOUTH AT TALLAHATCHIE RIVER						
CASSIDY BAYOU	MSYZ277R00_010	MS277E	Tallahatchie	Fish Consumption	Not Attaining	
LOCATION: AT WEBB FROM WATERSHED 275 BOUNDARY TO MOUTH AT TALLAHATCHIE RIVER				Secondary Contact	Attaining	
CASSIDY BAYOU	MSYZ274R00_010	MS274E	Coahoma, Quitman	Secondary Contact	Not Attaining	
LOCATION: NEAR MATTSON FROM HEADWATERS TO WATERSHED 275 BOUNDARY WHERE CASSIDY BAYOU TURNS EAST						
CHERRY CREEK	MSYZ234R00_010	MS234E	Pontotoc	Aquatic Life Support	Not Attaining, Biological Impairment	
LOCATION: NEAR ECRU FROM HEADWATERS TO MOUTH AT LAPPATUBBY CREEK						
CLEAR CREEK	MSYZ259R00_010	N/A	Lafayette	Aquatic Life Support	Attaining	
LOCATION: FROM HEADWATERS TO MOUTH AT SARDIS LAKE FLOOD POOL						
COILA CREEK	MSYZ357R00_030	MS357M4	Carroll	Aquatic Life Support	Not Attaining, Biological Impairment	
LOCATION: AT SEVEN PINES FROM LAKE DAM SOUTHEAST OF GRAVEL HILL TO MOUTH AT ABIACA CREEK						
COLDWATER RIVER	MSYZ303R00_010	N/A	Desoto, Tate	Secondary Contact	Attaining	
LOCATION: FROM THE CONFLUENCE OF CAMP CREEK CANAL TO MOUTH AT ARKABUTLA LAKE						
COLDWATER RIVER	MSYZ320RX0_010	MSCOLDR1E	Quitman	Secondary Contact	Not Attaining, TMDL Completed	
LOCATION: AT COLDWATER RIVER FROM CONFLUENCE WITH POMPEY DITCH TO CONFLUENCE WITH OLD LITTLE TALLAHATCHIE						

YAZOO RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
COLDWATER RIVER	MSYZ320RX0_030	MSCOLDR2M2	Desoto, Panola, Quitman, Tate, Tunica	Secondary Contact	Attaining
LOCATION: AT PRICHARD FROM CONFLUENCE WITH CUB LAKE BAYOU TO SPLIT WITH POMPEY DITCH ABOVE SARAH					
COLDWATER RIVER	MSYZ296R00_010	MS296E	Desoto, Marshall	Aquatic Life Support	Attaining
LOCATION: NEAR ALPHABA FROM HEADWATERS TO CONFLUENCE WITH CAMP CREEK					
CYPRESS CREEK	MSYZ242R00_010	MS242CE	Lafayette, Marshall	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR MACEDONIA FROM HEADWATERS TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
DAVIS CREEK	MSYZ287R00_010	MS287E	Lafayette	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SPRINGDALE FROM HEADWATERS TO MOUTH AT ENID LAKE FLOOD POOL					
DEER CREEK	MSYZ403R00_010	MS403M6	Washington	Fish Consumption	Not Attaining
LOCATION: FROM ARCOLA TO PERCY				Secondary Contact	Not Attaining, TMDL Completed
DEER CREEK-DA	MSYZ402R00_010	MS402E	Bolivar, Washington	Secondary Contact	Not Attaining, TMDL Completed
LOCATION: NEAR WINTERVILLE FROM LAKE BOLIVER TO DEER CREEK					
DUNCANS CREEK	MSYZ237R00_010	MS237E	Pontotoc	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ESPERANZA FROM HEADWATERS TO MOUTH AT MUD CREEK					
FANNEGUSHA CREEK	MSYZ359R00_010	MS359M4	Holmes	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ITUMA FRO HEADWATERS TO WATERSHED 361 BOUNDARY					

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
GRAHAM MILL CREEK	MSYZ253R00_010	N/A	Lafayette	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT LEE CREEK					
GREASY CREEK	MSYZ258R00_010	N/A	Lafayette, Panola	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO SARDIS LAKE FLOOD POOL					
HARLAND CREEK	MSYZ359R00_050	N/A	Holmes	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT BLACK CREEK				Secondary Contact	Attaining
HICKAHALA CREEK	MSYZ303R00_020	N/A	Tate	Secondary Contact	Attaining
LOCATION: FROM CONFLUENCE WITH SENATOBIA CREEK TO MOUTH AT ARKABUTLA LAKE FLOOD POOL					
HICKAHALA CREEK	MSYZ305R00_010	MS305E	Tate	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: FROM CONFLUENCE WITH JAMES WOLF CREEK TO CONFLUENCE WITH SENATOBIA					
HICKAHALA CREEK	MSYZ305R00_020	MS305M2	Tate	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH JAMES WOLF CREEK				Secondary Contact	Not Attaining, TMDL Completed
HORSEPEN CREEK	MSYZ329R00_010	MS329E	Calhoun, Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SABOUGLA FROM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL					
HOTOPHIA CREEK	MSYZ262R00_010	MS262E	Panola	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TERZA FROM HEADWATERS TO MOUTH AT LITTLE TALLAHATCHIE RIVER				Secondary Contact	Attaining

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
HURRICANE CREEK	MSYZ254R00_010	N/A	Lafayette	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT SARDIS LAKE FLOOD POOL					
HURRICANE CREEK	MSYZ307R00_010	MS307E	Desoto	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: NEAR HORN LAKE FROM HEADWATERS TO WATERSHED 303 BOUNDARY					
JAMES WOLF CREEK	MSYZ305R00_030	NS305M1	Tate	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: NEAR LOOXAHOMA FROM HEADWATERS BETWEEN AIKEN AND TYRO TO MOUTH AT HICKAHALA CREEK				Secondary Contact	Not Attaining, TMDL Completed
JOHNSON CREEK	MSYZ311R00_010	MS311E	Desoto	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HORN LAKE FROM HEADWATERS TO MOUTH AT LAKE CORMORANT BAYOU					
JOHNSON-COLES CREEK	MSYZ331R00_010	MS331E	Calhoun	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR YOUNGS FROM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL				Secondary Contact	Attaining
LAPPATUBBY CREEK	MSYZ233R00_010	MS233E	Pontotoc, Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ENTERPRISE FROM WATERSHED 232 BOUNDARY TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
LAPPATUBBY CREEK	MSYZ232R00_010	MS232E	Pontotoc	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT PONTOTOC FROM HEADWATERS TO WATERSHED 234 BOUNDARY					
LEE CREEK	MSYZ250R00_010	N/A	Lafayette	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT LITTLE TALLAHATCHIE RIVER					

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YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LITTLE MUD CREEK	MSYZ231R00_010	MS231E	Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR NORTHHAVEN FROM HEADWATERS AT AYERS CREEK TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
LITTLE SPRING CREEK	MSYZ252R00_020	N/A	Lafayette, Marshall	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS AT SPRING LAKE TO MOUTH AT TIPPAH RIVER AT SARDIS LAKE FLOOD POOL					
LITTLE TALLAHATCHIE RIVER	MSYZ228R00_010	MS228M	Marshall, Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT ETTA FROM CONFLUENCE WITH LAPPATUBBY CREEK TO WATERSHED 228				Secondary Contact	Not Attaining, TMDL Completed
LITTLE TALLAHATCHIE RIVER	MSYZ220R00_010	MS220E	Tippah, Union	Aquatic Life Support	Attaining
LOCATION: NEAR KEONVILLE FROM HEADWATERS TO WATERSHED 221 BOUNDARY				Secondary Contact	Attaining
LITTLE TALLAHATCHIE RIVER	MSYZ261R00_010	MS261E	Panola	Secondary Contact	Attaining
LOCATION: NEAR SARDIS FROM LOWER SARDIS LAKE TO CONFLUENCE WITH MCIVER CANAL					
LITTLE TOPASAW CREEK	MSYZ326R00_010	MS326L	Chickasaw, Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR WOODLAND FROM HEADWATERS TO MOUTH AT TOPASAW CREEK					
LOCKES CREEK	MSYZ239R00_010	MS239E	Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ENTERPRISE FROM HEADWATERS TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
LONG CREEK	MSYZ294R00_010	MS294E	Panola	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TEASDALE FROM HEADWATERS TO MOUTH AT YOCONA RIVER					

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
LUCKNUCK CREEK	MSYZ334R00_010	MS334E	Calhoun	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BURCE FROM HEADWATERS TO MOUTH AT SKUNA RIVER					
MCIVOR CREEK	MSYZ263R00_010	MS263E	Panola	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SARDIS FROM HEADWATERS TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
MILL CREEK	MSYZ243R00_010	MS243E	Marshall, Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CORNERSVILLE FROM HEADWATERS TO MOUTH AT SARDIS LAKE FLOOD POOL					
MITCHELL CREEK	MSYZ240R00_010	MS240E	Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR DARDEN FROM HEADWATERS AT DARDEN LAKE TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
MUD CREEK	MSYZ236R00_010	MS236E	Pontotoc	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR FLATWOOD FROM HEADWATERS TO CONFLUENCE WITH DUNCANS CREEK					
MUSSACUNA CREEK	MSYZ306R00_010	MS306M	Desoto	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HERNANDO FROM HERNANDO SOUTH POTW TO ARKABUTLA LAKE FLOOD POOL					
NORTH FORK TILLATOBA CREEK	MSYZ273R00_010	MS273E	Tallahatchie	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT CHARLESTON FROM HEADWATERS TO MOUTH AT TILLATOBA CREEK					
O'NEIL CREEK	MSYZ369R00_010	MS369E	Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR TINSLEY FROM CONFLUENCE WITH PERRY CREEK TO MOUTH AT YAZOO RIVER					

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
OAK CHEWALLA CREEK	MSYZ252R00_010	N/A	Lafayette, Marshall	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT TIPPAH RIVER AT SARDIS LAKE FLOOD POOL					
OAKLIMETER CREEK	MSYZ247R00_010	MS247OE	Benton, Marshall	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR POTTS CAMP FROM HEADWATERS TO MOUTH A TIPPAH CREEK					
OKACHICKIMA CREEK	MSYZ338R00_020	MS338K	Yalobusha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR HARDY FROM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL					
OLD LITTLE TALLAHATCHIE RIVER	MSYZ267R00_010	MS267M	Panola	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: NEAR BATESVILLE FROM STATE HWY 6 TO THE SOUTH PANOLA COUNTY LINE					
OPOSSUM BAYOU	MSYZ269R00_010	MS269E	Quitman, Tallahatchie	Secondary Contact	Attaining
LOCATION: NEAR LAMBERT FROM HEADWATERS TO MOUTH AT TALLAHATCHIE RIVER					
ORGAN CREEK	MSYZ338R00_010	MS338E	Yalobusha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BRYANT FORM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL					
OTOUCALOFA CREEK	MSYZ289R00_020	MS289OE	Calhoun, Lafayette, Yalobusha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO CONFLUENCE WITH MOORE CREEK				Secondary Contact	Attaining
OTOUCALOFA CREEK	MSYZ289R00_010	MS289OE	Yalobusha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM CONFLUENCE WITH MOORE CREEK TO MOUTH AT ENID LAKE FLOOD POOL				Secondary Contact	Not Attaining, TMDL Completed

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
PELUCIA CREEK	MSYZ356R00_010	MS356E	Carroll	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR VALLEY HILL FROM HEADWATERS TO WATERSHED 355 BOUNDARY					
PERRY CREEK	MSYZ369R00_030	MS369M2	Yazoo	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: NEAR OIL CITY FROM HEADWATERS NEAR DITCH BRANCH TO MOUTH AT O'NEIL CREEK					
PERSIMMON CREEK	MSYZ335R00_010	MS335E	Calhoun	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SHEPHERD FROM HEADWATERS TO MOUTH AT SKUNA RIVER				Secondary Contact	Not Attaining
PIGEON ROOST CREEK	MSYZ297R00_010	N/A	Desoto, Marshall, Tate	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT COLDWATER RIVER					
PINEY CREEK	MSYZ366R00_010	MS366E	Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR RENSHAW FROM HEADWATERS TO MOUTH AT YAZOO RIVER					
POMPEY DITCH	MSYZ322RX0_010	MSPOMPEYE	Quitman	Secondary Contact	Attaining
LOCATION: NEAR CRENSHAW FROM NORTH SPLIT WITH THE COLDWATER RIVER TO THE CONFLUENCE WITH THE COLDWATER RIVER NEAR DARLING					
POTACOAWA CREEK	MSYZ351R00_010	MS351E	Carroll, Leflore	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR AVALON FROM HEADWATERS TO MOUTH AT YALOBUSHA RIVER					
PUSKUS CREEK	MSYZ242R00_020	N/A	Lafayette	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO PUSKUS LAKE					

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WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
RED BANKS CREEK	MSYZ297R00_020	MS297M	Desoto, Marshall	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: NEAR INGRAMS MILL FROM HEADWATERS TO MOUTH AT PIGEON ROOST CREEK					
REDGRASS CREEK	MSYZ330R00_010	MS330RE	Grenada	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GRENADA FROM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL				Secondary Contact	Attaining
RIVERDALE CREEK	MSYZ341R00_010	MS341E	Grenada, Yalobusha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR GRENADA FROM HEADWATERS TO MOUTH AT YALOBUSHA RIVER					
ROCK CREEK	MSYZ310R00_010	MS310E	Desoto, Tate	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PRICHARD FROM HEADWATERS TO MOUTH AT COLDWATER RIVER					
SABOUGLA CREEK	MSYZ328R00_010	MS328E	Calhoun, Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SABOUGLA FROM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL					
SENATOBIA CREEK	MSYZ304R00_010	MS304M2	Tate	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: NEAR SENATOBIA FROM CONFLUENCE WITH NELSON CREEK TO CONFLUENCE WITH HICKAHALA CREEK				Secondary Contact	Not Attaining, TMDL Completed
SENATOBIA CREEK	MSYZ304R00_020	MS304M1	Panola, Tate	Aquatic Life Support	Not Attaining, TMDL Completed
LOCATION: NEAR COMO FROM HEADWATERS TO CONFLUENCE WITH NELSON CREEK				Secondary Contact	Attaining
SHELBY CREEK	MSYZ245R00_010	N/A	Benton, Tippah	Aquatic Life Support	Attaining
LOCATION: NEAR WHITE FROM HEADWATERS TO MOUTH AT TIPPAAH RIVER					

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YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
SHELTON CREEK	MSYZ292R00_030	MS292U	Panola, Tallahatchie	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR CROWDER FROM HEADWATERS TO MOUTH AT YOCONA RIVER					
SHORT CREEK	MSYZ368R00_010	MS368E	Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR JONESTOWN FROM HEADWATERS TO MOUTH AT YAZOO RIVER					
SHORT FORK CREEK	MSYZ301R00_010	MS301E	Desoto	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR ALPHABA FROM HEADWATERS THROUGH CANAL TO COLDWATER RIVER					
SKUNA RIVER	MSYZ333R00_010	MS333LSE	Calhoun	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT BURCE FROM PERSIMMON CREEK TO MOUTH AT GRENADA LAKE FLOOD POOL				Fish Consumption	Not Attaining
SKUNA RIVER	MSYZ333R00_020	MS333USE	Calhoun	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BURCE FROM WATERSHED 332 BOUNDARY TO CONFLUENCE WITH PERSIMMON CREEK				Secondary Contact	Attaining
SKUNA RIVER CANAL	MSYZ332R00_010	MS332S	Calhoun, Chickasaw, Pontotoc	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BUCKHORN FROM HEADWATES TO WATERSHED BOUNDARY 333					
STEELE BAYOU	MSYZ407R00_010	MS407S	Issaquena, Sharkey, Warren	Fish Consumption	Not Attaining
LOCATION: NEAR ONWARD FROM HWY 1 TO MOUTH AT YAZOO RIVER					
STRAYHORN CREEK	MSYZ317R00_010	MS317E	Tate	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SARAH FROM HEADWATERS TO MOUTH AT ARKABUTLA CREEK					

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
TALLAHATCHIE RIVER	MSYZ278R00_020	MSTALARM1	Leflore, Tallahatchie	Secondary Contact	Attaining
LOCATION: NEAR SWAN LAKE AT WATERSHED 277 BOUNDARY TO PHILLIP CUTOFF					
TALLAHATHCIE RIVER	MSYZ278R00_010	N/A	Leflore, Tallahatchie	Secondary Contact	Attaining
LOCATION: FROM PHILLIPS CUTOFF TO YAZOO RIVER CUTOFF AT HWY 49 AT GREENWOOD					
TESHEVA CREEK	MSYZ364R00_010	MS364E	Yazoo	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR EDEN FRO HEADWATERS TO WATERSHED 364 BOUNDARY					
THOMPSON CREEK	MSYZ369R00_020	MS369M3	Yazoo	Aquatic Life Support	Attaining
LOCATION: AT TINSLEY FROM HEADWATERS TO CONFLUENCE WITH PERRY CREEK					
TILLATOBA CREEK	MSYZ272R00_010	MS272E	Tallahatchie, Yalobusha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT CHARLESTON FROM HEADWATERS TO CONFLUENCE WITH NORTH FORK TILLATOBA CREEK					
TIPPAH RIVER	MSYZ246R00_010	MS246E	Benton, Marshall	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR BETHLEHEM FROM WATERSHED 245 BOUNDARY TO CONFLUENCE WITH OAKLIMITER CREEK					
TOBY TUBBY CREEK	MSYZ257R00_010	N/A	Lafayette	Aquatic Life Support	Attaining
LOCATION: FROM HEADWATERS TO MOUTH AT SARDIS LAKE FLOOD POOL					
TOPASHAW CREEK	MSYZ325R00_010	MS325TE	Calhoun, Chickasaw, Webster	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR SABOUGLA FROM HEADWATERS TO MOUTH AT YALOBUSHA RIVER					

YAZOO RIVER					
WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
TOWN CREEK	MSYZ289R00_030	MS289TE	Yalobusha	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: AT WATER VALLEY FROM HEADWATERS TO MOUTH AT OTOUCALOFA CREEK				Secondary Contact	Not Attaining, TMDL Completed
TURKEY CREEK	MSYZ336R00_010	N/A	Yalobusha	Aquatic Life Support	Attaining
LOCATION: NEAR COFFEEVILLE FROM HEADWATERS TO MOUTH AT GRENADA LAKE FLOOD POOL				Secondary Contact	Attaining
UNNAMED TRIB TO LITTLE TALLAHATCHIE RIVER	MSYZ241R00_010	MS241U	Union	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PINEDALE FROM HEADWATERS TO MOUTH AT LITTLE TALLAHATCHIE RIVER					
UNNAMED TRIB TO YOCONA RIVER	MSYZ292R00_040	MSYZ292R00_040	Panola, Tallahatchie	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM HEADWATERS TO MOUTH AT YOCONA RIVER					
WHITES CREEK	MSYZ311R00_020	MS311WE	Desoto, Tunica	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR PRICHARD FROM HEADWATERS TO LAKE CORMORANT BAYOU					
YALOBUSHA RIVER	MSYZ339R00_020	MSYLBUSHE	Grenada	Fish Consumption	Not Attaining
LOCATION: FROM GRENADA RESERVOIR SPILLWAY TO GRENADA POTW OUTFALL				Secondary Contact	Attaining
YAZOO RIVER	MSYZ314RX0_020	MSYAZR3E	Humphreys, Leflore	Secondary Contact	Attaining
LOCATION: FROM CONFLUENCE OF SNAKE CREEK TO CONFLUENCE WITH NORTH END OF LOWER AUXILLARY CHANNEL					
YAZOO RIVER	MSYZ314RX0_030	MSYAZR3M1	Holmes, Humphreys, Leflore	Fish Consumption	Not Attaining
LOCATION: FROM CONFLUENCE OF TALLAHATHCIE AND YALOBUSHA RIVERS TO CONFLUENCE WITH SNAKE CREEK					

YAZOO RIVER

WATER BODY NAME	ASSESSMENT UNIT	§ 303(d)	COUNTY	USE	ASSESSMENT STATUS
YOCONA RIVER	MSYZ279R00_010	MS279E	Lafayette, Pontotoc	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: NEAR YOCONA FROM HEADWATERS TO WATERSHED 280 BOUNDARY					
YOCONA RIVER	MSYZ292R00_020	MSYOCRM	Panola, Tallahatchie,	Fish Consumption	Not Attaining, TMDL Completed
LOCATION: FROM DAM AT ENID RESERVOIR TO CONFLUENCE WITH LONG CREEK					
YOCONA RIVER	MSYZ280R00_010	MS280E	Lafayette	Aquatic Life Support	Not Attaining, Biological Impairment
LOCATION: FROM WATERSHED 279 BOUNDARY TO CONFLUENCE WITH BURNEY BRANCH					
YOCONA RIVER	MSYZ285R00_010	MS285E	Lafayette	Aquatic Life Support	Attaining
LOCATION: FROM CONFLUENCE WITH BURNEY BRANCE TO CONFLUENCE WITH DAVIS CREEK					