LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

THE BAYOU LACOMBE COMPLEX

LAKE HISTORY & MANAGEMENT ISSUES

CHRONOLOGY

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WATERBODY HISTORY

GENERAL INFORMATION

The Bayou Lacombe complex, located on the northeastern corner of Lake Pontchartrain, is comprised of seven designated water bodies. Four primary bayous (Bayou Lacombe, Cane Bayou, Bayou Liberty and Bayou Bonfouca) make up the bulk of the complex, which drains approximately 154,298 acres (**APPENDIX I**, Figures 1 and 2). Largemouth Bass (*Micropterus salmoides)* , Bluegill *(Lepomis macrochirus)*, Redear Sunfish (*Lepomis microlophus)*, Longear Sunfish (*Lepomis megalotis)*, Warmouth *(Lepomis gulosus*), Black Crappie (*Pomoxis nigromaculatus*), Channel Catfish (*Ictalurus punctatus*), Red Drum (*Sciaenops ocellatus*), Black Drum (*Pogonias cromis*), Spotted Seatrout (*Cynoscion nebulosus*), , Sand Seatrout (*Cynoscion arenarius)*, Southern Flounder (*Paralichthys lethostigma*), Sheepshead (*Archosargus probatocephalus*) and Atlantic croaker (*Micropogonias undulatus*) are targeted by anglers. Furthermore, many people recreationally and commercially fish for blue crab and bait species near the mouth and along the shores of these bayous.

Bayou Lacombe

Bayou Lacombe flows 20 miles through St. Tammany Parish. It originates in Talisheek, LA, near the junction of Louisiana Highway 41 and Louisiana Highway 435 and flows southward to Lake Pontchartrain (**APPENDIX I**, Figure 2). Aquatic habitat within the bayou varies from shallow sand and gravel riffles in the upper reaches to deep, slow flowing water near the lake. Terrestrial habitats vary from wet pine savannah at the origin to bottomland hardwood, cypress tupelo swamp to fresh and brackish marsh at the mouth of the bayou. The Louisiana Department of Environmental Quality (LDEQ) divides Bayou Lacombe into two sub segments (040901 and 040902). The entire length is designated as a Louisiana Natural and Scenic Stream (Louisiana RS 56:1847). Bayou Lacombe offers fishing opportunity for boaters, kayakers, and bank fishermen.

Cane Bayou

Cane Bayou is located on the western edge of the complex nestled between Fontainebleau State Park and Big Branch National Wildlife Refuge. The bayou stretches approximately 5.75 miles through St. Tammany Parish and resembles Bayou Lacombe's aquatic and terrestrial habitats (APPENDIX I, Figure 2.). The Louisiana Department of Environmental Quality (LDEQ) divides Cane Bayou into two sub segments (040903 and 040904). The entire length is designated as a Louisiana Natural and Scenic Stream

Bayou Liberty

Bayou Liberty is located on the eastern end of the complex with portions within the town of Slidell. The bayou stretches approximately 14.75 miles through St. Tammany Parish and resembles Bayou Lacombe's aquatic and terrestrial habitats (APPENDIX I, Figure 2). The Louisiana Department of Environmental Quality (LDEQ) divides Bayou Liberty into two sub segments (040905 and 040906). The entire length is designated as a Louisiana Natural and Scenic Stream

Bayou Bonfouca
Bayou Bonfouca is located on the eastern edge of the complex with portions within the town of Slidell. The bayou stretches approximately 10.5 miles through St. Tammany Parish and resembles Bayou Lacombe's aquatic and terrestrial habitats (APPENDIX I, Figure 2.). The Louisiana Department of Environmental Quality (LDEQ) divides Bayou Bonfouca into two sub segments (040907 and 040908).

Watershed
The Bayou Lacombe Complex drains approximately 154,298 acres of land.

Location
The Bayou Lacombe Complex is located in St. Tammany Parish in southeastern Louisiana.

Border Waters
The Bayou Lacombe Complex is bordered on the west by Fontainebleau State Park, on the east by the town of Slidell, and on the south by Lake Pontchartrain.

Water Authority
The Louisiana Department of Natural Resources (LDNR) has authority over all surface water withdrawals for commercial purposes as per the Surface Water Management Act - La. R S 30:961-963 (Act 955 of the 2010 legislative session).
http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=92

Authorization
The State of Louisiana has authority of the state owned water bottom and regulates the fisheries of the Bayou Lacombe Complex. Bayou Lacombe, Cane Bayou, and Bayou Liberty are designated as natural scenic streams by LA. RS 56:1856: known as "The Louisiana Scenic Rivers Act". The laws governing Natural and Scenic River Systems regulate some land practices along the bayou and also protect it from hydrologic alterations.

Associations
There are currently no known waterbody commissions or authorities associated with the Bayou Lacombe Complex. The Pontchartrain Conservancy (PC) actively participates in a water quality task force. This task force monitors water quality in the Complex and throughout the Pontchartrain Conservancy. For more information on PC activities please visit their website at: http://www.saveourlake.org/

ACCESS

The bayous within the Bayou Lacombe Complex are accessible from Lake Pontchartrain and six boat launches. There are two Wallop-Breaux sponsored boat launches located at Main St. in Lacombe and Heritage Park on Bayou Bonfouca. The United States Fish and Wildlife Service (USFWS) owns and maintains a launch near the mouth of the bayou on Lake Rd. in Lacombe, LA.

Boat Docks and Launches

There are small boat docks located at the boat launches at Main St. in Lacombe, LA and the USFWS launch on Lake Rd. in Lacombe, LA (**APPENDIX II, Figure 1.**). There are six boat launches located in the complex (Table 1.).

Table 1. Boat launches located in the Bayou Lacombe Complex.

LAUNCHES	LATITUDE	LONGITUDE
Bayou Cane Launch	30.337451	-90.004105
Lacombe Main Street Launch *	30.309177	-89.929396
Lacombe Lake Road Launch	30.268423	-89.955927
Liberty Elks Lodge (Private Launch)	30.292919	-89.827247
St. Genevieve Church (Private Launch)	30.268376	-89.844808
Heritage Park Bayou Bonfouca *	30.278384	-89.783538

*Wallop-Breaux sponsored boat launch

Piers

There is a small pier at the USFWS launch on Lake Rd. in Lacombe, LA.

State/Federal Facilities

The Louisiana Department of Wildlife and Fisheries (LDWF) owns and manages the Huey P. Long Fish Hatchery located on Fish Hatchery Road in Lacombe, LA. The hatchery is adjacent to the west bank of Bayou Lacombe. The USFWS Big Branch National Wildlife Refuge (Big Branch NWR) field office is located on the east bank of Bayou Lacombe in Lacombe, LA. The Fontainebleau State Park in Mandeville is a 2,800-acre park located on the shore of Lake Pontchartrain and the west bank of Cane Bayou.

SHORELINE DEVELOPMENT

State/National Parks

Bayou Lacombe flows through Big Branch NWR. The USFWS estimated 49,300 people visited the refuge in 2005 (USFWS 2007).

Fontainebleau State Park in Mandeville is located on the shore of Lake Pontchartrain and the west bank of Cane Bayou.

Shoreline Development by Landowners

The lower reaches of Bayou Lacombe (excluding Big Branch NWR), Bayou Liberty, and Bayou Bonfouca are congested with residential development. Furthermore, manmade canals and natural bayous connected to the bayou have been developed for waterfront residences. (**APPENDIX III**, Figures 1 & 2).

PHYSICAL DESCRIPTION

Shoreline Length
Approximately 102.5 miles for both, ascending and descending shorelines.

Timber / Vegetation Type
Shoreline vegetation transitions from upland pine and hardwood mix to cypress and tupelo to bull tongue and rushes to Spartina in the brackish reaches near Lake Pontchartrain. Submersed aquatic vegetation (SAV) in the bayou consists of coontail, widgeon grass, naiad and eelgrass. However, SAV is not static. Fluctuations in location, density, and species composition are affected by increased salinities from hurricanes and tropical storms. Algae blooms and competition from epiphytic algae also affect the density and composition of SAV.

Natural Seasonal Water Fluctuation
The Bayou Lacombe Complex drains approximately 154,298 acres of land area. Local rainfall can greatly affect water levels. Also, high tides in Lake Pontchartrain can completely stop the downstream flow of the bayou. The USGS stream level gauge in Bayou Lacombe near US Hwy 190 is currently not providing data.

EVENTS / PROBLEMS

Van Vrancken (2007) documented the disappearance of *Cyprinella venusta* (Blacktail shiner) in Bayou Lacombe over the last 35 years. He attributed the decline to natural and anthropogenic influences. In a 2016 survey, LDWF located the blacktail shiner at one site within the complex, but it was absent from the 2020 survey. *C. venusta* may exist in low numbers but is not extirpated from the system. Van Vrancken's study compared fish assemblages with those described in Sobczak (1976). The 2016 and 2020 fish assemblage survey conducted by LDWF can also be compared to these studies. Hurricanes Katrina in 2005 and Gustav in 2008 were reported to have caused fish kills in the Bayou Lacombe Complex. However, no official investigations or quantitative estimates were conducted by LDWF. Silver carp achieved access to Bayou Lacombe via the Bonnet Carré Spillway opening in 2011. In 2013, giant salvinia was found in small quantities in Bayou Lacombe; this invasive has spread throughout Bayou Lacombe and is now present on Cane Bayou, Bayou Liberty, and Bayou Bonfouca.

Aquatic Vegetation
Giant salvinia is now present in the entire Bayou Lacombe Complex.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Type Map
LDWF has not conducted a full assessment of aquatic vegetation (typemap) in the lower portion of the Bayou Lacombe Complex. However, Van Vranken reported dense growths of

submersed aquatic plants including coontail (Ceratophyllum demersum), Eurasian water milfoil (Myriophyllum spicatum), widgeon grass (Ruppia maritima) and fanwort (Cabomba caroliniana) on Bayou Lacombe. Eel grass (Vallisneria americana) growing along the shoreline in the lower portion of the bayou has been observed by LDWF over the past few years.

In May 2013, giant salvinia (Salvinia molesta) was found in Bayou Lacombe. Initially, less than 0.5 acres of plant material was found in a small manmade canal just off of the main bayou. An assessment of the area conducted on October 20, 2013 concluded that the plant had spread to several canals and shallow marsh drains along the bayou. The plant is now ubiquitous in Bayou Lacombe and Cane Bayou. It has spread into Bayou Liberty and Bayou Bonfouca, but persists in low quantities in these waterbodies.

Biomass

No biomass sampling has been conducted.

Past Control Measures

Chemical Control

Herbicide applications have been made in accordance with the approved Aquatic Herbicide Application Procedures (Table 2) from boat-mounted spray equipment when necessary. Since 2016, 3,968 acres of aquatic vegetation have been treated (Table 3). During 2020, water primrose and common salvinia were the most treated invasive aquatic plants (Table 4).

Biological Control

District 8 has stocked a total of 180,846 giant salvinia weevils (*Cyrtobagous salviniae*) in the marshes of Lake Pontchartrain close to Bayou Lacombe, Cane Bayou, Bayou Liberty, and Bayou Bonfouca. There is evidence of a sustained population of giant salvinia weevil in ponds adjacent and connected to Bayou Bonfouca.

Physical Control

None at this time, but containment boom was strategically placed throughout the complex in an effort to keep giant salvinia from infesting previously unaffected areas. Specifically, infestations of giant salvinia in the shallow marshes within Big Branch NWR was boomed off to keep giant salvinia from moving into the bayou, as these areas are very difficult to treat by boat. The boom was removed in 2020 since the giant salvinia declined drastically in these areas.

Table 2. LDWF Aquatic Herbicide Application Procedures

Plant Species	Herbicide	Surfactant
***Salvinia spp*. Alternative 1** Common/Giant Salvinia (April 1 to October 31)	Glyphosate (0.75 gal/acre) Diquat (0.25 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
***Salvinia spp*. Alternative 2** Common/Giant Salvinia (April 1 to October 31)	Glyphosate (0.75 gal/acre) Flumioxazin (2 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
***Salvinia spp*. Alternative 3** Common/Giant Salvinia (April 1 to October 31)	MSM (1 oz./acre) Flumioxazin (1 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
***Salvinia spp*. Alternative 4** Common/Giant Salvinia (November 1 to March 31)	Diquat (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
***Salvinia spp*. Alternative 5** Common/Giant Salvinia (November 1 to March 31)	Flumioxazin (12 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Water Hyacinth	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
Water Hyacinth in waiver areas (March 15 to September 15)	Glyphosate (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
Alligator Weed/Giant Cut Grass (undeveloped areas)	Imazapyr (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Alligator Weed/Giant Cut Grass (developed areas)	Imazamox (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
American Lotus	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
American Lotus in waiver areas (March 15 to September 15)	Glyphosate (0.5 gal/acre)	Nonionic surfactant (0.25 gal/acre)
American Lotus in waiver areas with potable water intakes (March 15 to September 15)	Triclopyr (0.5gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Duckweed	Diquat (1.0 gal/acre) or Flumioxazin (8 oz./acre)	Nonionic surfactant (0.25 gal/acre) or Turbulence (or approved equivalent, 0.25 gal/acre)
Cuban Bulrush (sedge)	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
Cuban Bulrush (sedge) in waiver areas (March 15 to September 15)	Glyphosate (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
Water Lettuce	Diquat (1.0 gal/acre) or Flumioxazin (6 oz./acre)	Nonionic surfactant (0.25 gal/acre) or Turbulence (or approved equivalent, 0.25 gal/acre)

Table 3. Acres of vegetation treated by waterbody from 2016-2020 in the Bayou Lacombe complex.

Waterbody	2016	2017	2018	2019	2020	Total
40901 (Upper Bayou Lacombe)	2	5	5	0	0	12
40902 (Lower Bayou Lacombe)	252.62	211	310	340	220	1333.62
40903 (Upper Bayou Cane)	0	10	0	10	0	20
40904 (Lower Bayou Cane)	20	0	40	40	40	140
40905 (Upper Bayou Liberty)	89.91	173	130.01	70	100	562.92
40906 (Lower Bayou Liberty)	16.6	119.01	60	0	20	215.61
40907 (Upper Bayou Bonfuca)	106.6	270	210	170	220	976.6
40908 (Lower Bayou Bonfuca)	147.26	90	0	50	0	287.26
40909 (W-14 Main Diversion Canal)	0	90	0	20	0	110
40910 (Salt Bayou)	0	0	60	70	0	130
41001 (Lake Pontchartrian)	20	90	0	30	0	140
41002 (Lake Pontchartrain)	10	0	20	10	0	40
Total	664.99	1058.01	835.01	810	600	3968.01

Table 4. Acres of vegetation treated during 2020 in the Bayou Lacombe complex.

Waterbody code	Alligator Weed	Water Primrose	Common Salvinia	Giant Salvinia	Sedge	Torpedo Grass	Water Hyacinth	Total
40902 (Lower Bayou Lacombe)	32	91	43.5	45.5	2.5	5.5	0	220
40904 (Lower Bayou Cane)	2	2	0	0	0	0	36	40
40905 (Upper Bayou Liberty)	7	44	34	8	0	0	7	100
40906 (Lower Bayou Liberty)	0	8	6	6	0	0	0	20
40907 (Upper Bayou Bonfuca)	3	77	82.5	24.5	0	3	30	220
Total	44	222	166	84	2.5	8.5	73	600

HISTORY OF REGULATIONS

Recreational

Statewide regulations for recreational fresh and saltwater species apply.
Recreational fishing regulations for 2017 may be viewed at the link below:
http://www.wlf.louisiana.gov/regulations

Commercial

Statewide regulations for commercial fresh and saltwater species apply.
Commercial fishing regulations for 2013 may be viewed at the link below:
http://www.wlf.louisiana.gov/regulations

FISH KILLS / DISEASE HISTORY

Naturally occurring kills of Gulf menhaden have occurred from August through October. Large schools of menhaden enter the bayou from Lake Pontchartrain. Overnight, dissolved oxygen (DO) concentrations sometimes plummet, and menhaden succumb to anoxia. Typically, DO concentrations return to normal during the subsequent daylight hours. Tropical storms, hurricanes, and other high tide events are also responsible for fish kills. Van Vrancken (2007) found significant differences in the fish assemblages of Bayou Lacombe following Hurricane Katrina in 2005. Sampling has not been conducted to determine presence of Largemouth Bass Virus (LMBV).

CONTAMINANTS / POLLUTION

Water Quality

According to the 2020 Louisiana Water Quality Inventory: Integrated Report, (https://ldeq.maps.arcgis.com/apps/MapSeries/index.html?appid=8186b44f9a30453483fedd0df4bad9fa), LDEQ sub segment 040901 does not support fish and wildlife propagation due to naturally occurring organic acids. However, outstanding natural resource and primary and secondary contact recreation uses are fully supported. Fish in this sub segment have been tested for mercury but levels were not found to be a cause for concern.

According to the 2020 Louisiana Water Quality Inventory: Integrated Report, LDEQ sub segment 040902 does support fish and wildlife propagation and primary contact recreation uses. Outstanding natural resource and secondary contact recreation uses are fully supported. Fish in this sub segment have been tested for mercury contamination, and results indicate further testing is needed. There is no advisory in the area at this time. Information for Bayou Lacombe water quality can be found by visiting the following Environmental Protection Agency (EPA) web links:

https://www.epa.gov/sites/production/files/2015-09/documents/la-2014-303d_decision_document.pdf

https://www.epa.gov/sites/production/files/2015-09/documents/epa_responsiveness_summary-2014-303d_list.pdf

BIOLOGICAL

Biological Samples

Inland Fisheries standardized electrofishing samples of Largemouth Bass (LMB) and crappie are collected from navigable areas of Bayou Lacombe (waterbody codes 040901 and 040902). Twenty-nine standardized electrofishing samples for Largemouth Bass and seven forage samples were taken between1996 and 2013 (Table 5). No samples were taken in years 1997-2005, 2008, 2010, and 2011.

Note: All standardized sampling data collected by Inland Fisheries from 1965 through present are computerized. Any data prior to 1965 in the form of paper documents or reports are listed below.

Table 5. Sampling efforts for Bayou Lacombe, LA from 1996 – 2020

BAYOU LACOMBE SAMPLING	
1996	Electrofishing – 2 stations (spring) Electrofishing – 4 stations (fall)
2006	Electrofishing – 7 stations (spring) Electrofishing – 4 stations (fall)
2007	Electrofishing – 2 stations (spring) Electrofishing – 6 stations (fall) Forage (EF) - 6 stations (fall)
2009	Electrofishing – 2 stations (spring) Electrofishing – 2 stations (fall) Forage (EF) - 1 stations (fall)
2012	Electrofishing – 5 stations (spring) Electrofishing – 5 stations (fall) Forage (EF) - 3 stations (fall)
2013	Electrofishing – 4 stations (spring)
2016	Boat Electrofishing - 14 – 15 minute samples Backpack Electrofish - 8 – 150 meters to a maximum of 300 meters sample
2020	Boat Electrofishing - 14 – 15 minute samples Backpack Electrofish - 8 – 150 meters to a maximum of 300 meters sample

Current Sampling Objectives

Understanding river basin biotic assemblages is an important aspect of fisheries management. Changes in community structure of aquatic biota in river systems, including their many tributaries within the watershed, are indicators of anthropogenic and natural disturbances. Fish communities are sensitive to a wide array of direct and indirect stresses, including the effects of point source and non-point source pollution, sedimentation and changes in substrate deposition, habitat loss, riparian zone disruption, physicochemical changes in water chemistry and flow modification (Fausch et al. 1990). Fishes occupy positions throughout the aquatic food web and share a unique relationship. LDWF analyzes species composition of fish in the watershed, as well as sportfish parameters on the lower reaches of the Bayou Lacombe complex.

Fish Assemblage and Sportfish

Beginning in 2016, standardized electrofishing sampling was enhanced by expanding the range and number of fish surveys. All fish samples following 2015 were performed according to the standards outlined in the Office of Fisheries Inland Fisheries Section Standard Operating Procedures for Conducting Biomonitoring of Fish and Mussel Communities in Rivers and Wadeable Streams. Samples consist of 22 fish samples (Table 5). Fish sample sites contain historic as well as new sites (Tables 6 & 7, and APPENDIX IV, Figures 1 & 2).

Note: The Operating Procedures for Conducting Biomonitoring of Fish and Mussel Communities in Rivers and Wadeable Streams protocol was developed in 2015 in response to the 2011 Pearl River Temple Inland Fish Kill. At the time, in 2011, LDWF had no baseline data on the Pearl River. Although LDWF was able to calculate the total number of fish killed, there was no previous data to make a comparison. With this sampling protocol in place, assessing any major impact to one of our rivers or streams will be far more effective and efficient.

Table 6. LDWF boat electrofishing sample sites for the Bayou Lacombe Complex 2016-2024.

Station Code	Latitude	Longitude
4071	30.2890	-89.9579
4072	30.2812	-89.9490
4073	30.2895	-89.9309
4075	30.3097	-89.9272
4067	30.3219	-89.9421
4262	30.3450	-89.9342
4269	30.3265	-90.0149
4270	30.3352	-90.0060
4077	30.2636	-89.8575
4079	30.2927	-89.8269
4271	30.3078	-89.8337
4195	30.2573	-89.7983
4082	30.2784	-89.7838
4274	30.2928	-89.7894

Table 7. LDWF backpack electrofishing sample sites for the Bayou Lacombe Complex 2016-2024.

Station Code	Latitude	Longitude
4263	30.4472	-89.8340
4264	30.4380	-89.8404
4265	30.4377	-89.8521
4266	30.4216	-89.8579
4267	30.3934	-89.8947
4268	30.3656	-89.9224
4272	30.3360	-89.8409
4273	30.3505	-89.8463

Stocking History

The Huey P. Long Fish Hatchery is adjacent to Bayou Lacombe and has been in operation since 1931. In recent years, these ponds were used to produce Phase II Florida Largemouth Bass. Since 2005, LDWF has stocked 3,486 Florida Largemouth Bass in Bayou Lacombe (Table 8).

Table 8. LDWF stocking history for Bayou Lacombe 2005-2013.

Year	Species	Number Stocked
2005	Florida Largemouth Bass	1,000
2006	Florida Largemouth Bass	2,230
2008	Florida Largemouth Bass	256
Total		**3,486**

Species Profile

Compiled by Van Vrancken (2007), LDWF standardized electrofishing results and anecdotal reports; a list of fish species found in the Bayou Lacombe Complex is listed in Table 9.

Table 9. Fish species list for Bayou Lacombe, Louisiana

Common Name	**Scientific Name**
Alligator Gar	*Atractosteus spatula*
American Eel	*Anguilla rostrata*
Banded Pygmy Sunfish	*Elassoma zonatum*
Bantam Sunfish	*Lepomis symmetricus*
Bay Anchovy	*Anchoa mitchilli*
Bayou Topminnow	*Fundulus nottii*
Black Bullhead	*Ameiurus melas*
Black Crappie	*Pomoxis nigromaculatus*
Blackspotted Topminnow	*Fundulus olivaceus*
Blackstripe Topminnow	*Fundulus notatus*

Blacktail Shiner	*Cyprinella venusta*
Blue Catfish	*Ictalurus furcatus*
Bluegill Sunfish	*Lepomis macrochirus*
Bowfin	*Amia calva*
Brook Silverside	*Labidesthes sicculus*
Brown Bullhead	*Ameiurus nebulosus*
Noturus Phaeus	*Brown Madtom*
Channel Catfish	*Ictalurus punctatus*
Clear Chub	*Hybopsis winchelli*
Creek Chubsucker	*Erimyzon oblongus*
Dollar Sunfish	*Lepomis marginatus*
Flier	*Centrarchus macropterus*
Gizzard Shad	*Dorosoma cepedianum*
Golden Shiner	*Notemigonus crysoleucas*
Golden Topminnow	*Fundulus chrysotus*
Goldstripe Darter	*Etheostoma parvipinne*
Grass Pickerel	*Esox americanus*
Gulf Killifish	*Fundulus grandis*
Gulf Menhaden	*Brevoortia patronus*
Hogchocker	*Trinectes maculates*
Inland Silverside	*Menidia beryllina*
Lake Chubsucker	*Erimyzon sucetta*
Largemouth Bass	*Micropterus salmoides*
Least Killifish	*Heterandria formosa*
Longear Sunfish	*Lepomis megalotis*
Longnose Gar	*Lepisosteus osseus*
Mississippi Silverside	*Menidia audens*
Mosquitofish	*Gambusia affinis*
Pirate Perch	*Aphredoderus sayanus*
Rainwater Killifish	*Lucania parva*
Red Spotted Sunfish	*Lepomis miniatus*
Redear Sunfish	*Lepomis microlophus*
Sharpfin Chubsucker	*Erimyzon tenuis*
Sheepshead	*Archosargus probatocephalus*
Silver Carp	*Hypophthalmichthys molitrix*
Spotted Bass	*Micropterus punctulatus*
Spotted Gar	*Lepisosteus oculatus*
Spotted Sucker	*Minytrema melanops*
Starhead Topminnow	*Fundulus notti*
Striped Mullet	*Mugil cephalus*
Swamp Darter	*Etheostoma fusiforme*

Tadpole Madtom	*Noturus gyrinus*
Threadfin Shad	*Dorosoma petenense*
Warmouth	*Lepomis gulosus*
Weed Shiner	*Notropis texanus*
Yellow Bullhead	*Ameiurus natalis*

Genetics

Florida Largemouth Bass have been introduced to the Bayou Lacombe Complex. However, no genetic sampling has been conducted to confirm the presence / absence of Florida influence.

Threatened/Endangered/Exotic Species

The following are species of conservation concern in the Pontchartrain Basin which includes the Bayou Lacombe Complex: Gulf sturgeon (*Acipenser oxyrinchus desotoi*), Paddlefish (*Polyodon spathula*), Flagfin Shiner (*Pteronotropis signipinnis*), River Redhorse (*Moxostoma carinatum*), and the Gulf Logperch (*Percina suttkusi*; (Lester et al. 2005). Silver Carp gained access to the Complex via the Bonnet Carré Spillway opening in 2011 and continue to sparsely populate the area. As of 2017, the highly invasive apple snail (*Pomacea maculata)* is present throughout the Complex.

CREEL SURVEYS

LDWF has not conducted a creel survey of the Bayou Lacombe Complex.

HYDROLOGICAL CHANGES

Some dredging occurred in the upper reach of Bayou Lacombe for drainage purposes during the 1950's. Activities are currently regulated through the Natural and Scenic Rivers Act (Louisiana RS 56:1840-1855).

WATER USE

Hunting

The Bayou Lacombe Complex provides access to Big Branch NWR and private property. The refuge and surrounding private marshes are popular for duck, whitetail deer (archery only), and wild hog hunting.

Skiing

The lower reach of Bayou Lacombe is popular for boating. However, several "no wake" ordinances are in effect.

Scuba Diving

The Bayou Lacombe Complex has low water clarity and is not popular for diving.

Swimming
Swimming from private residences is not uncommon.

Irrigation
Water withdrawals are prohibited, except for withdrawals made by an individual, adjacent property owner for residential purposes only (LAC Title 76: Part IX 117)

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APPENDIX I

(return to general)

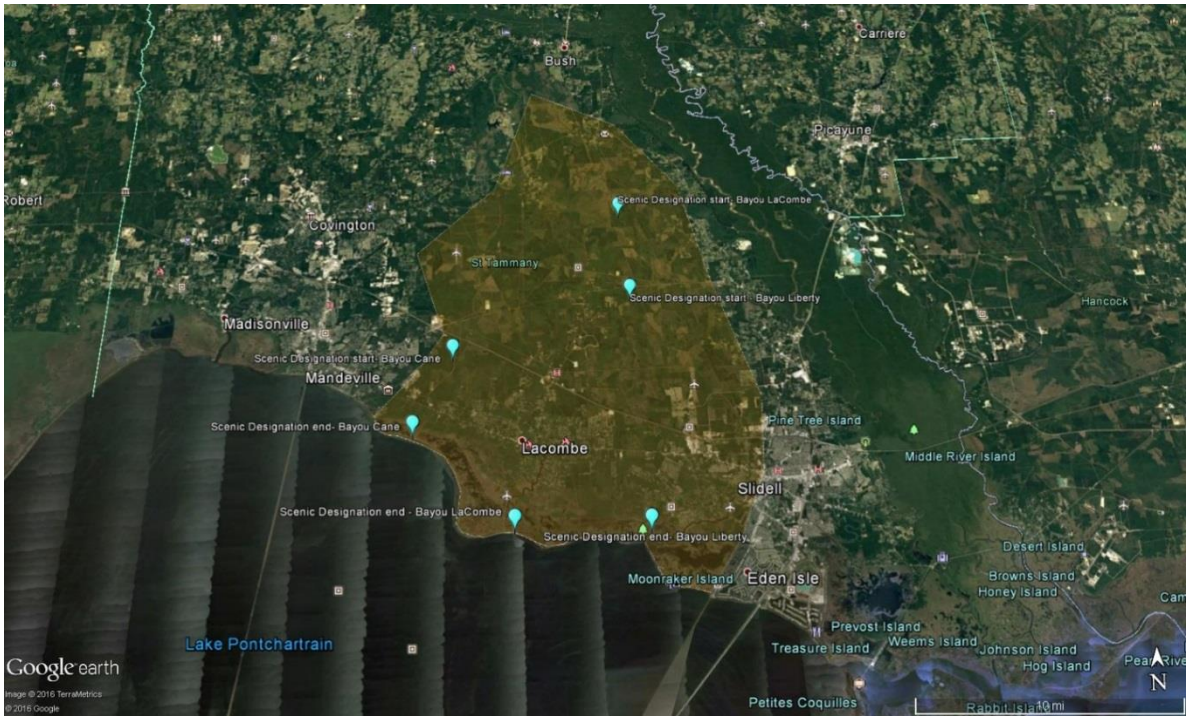

Figure 1. The Bayou Lacombe Complex drainage is comprised of seven designated water bodies draining approximately 154,298 acres in southeast Louisiana.

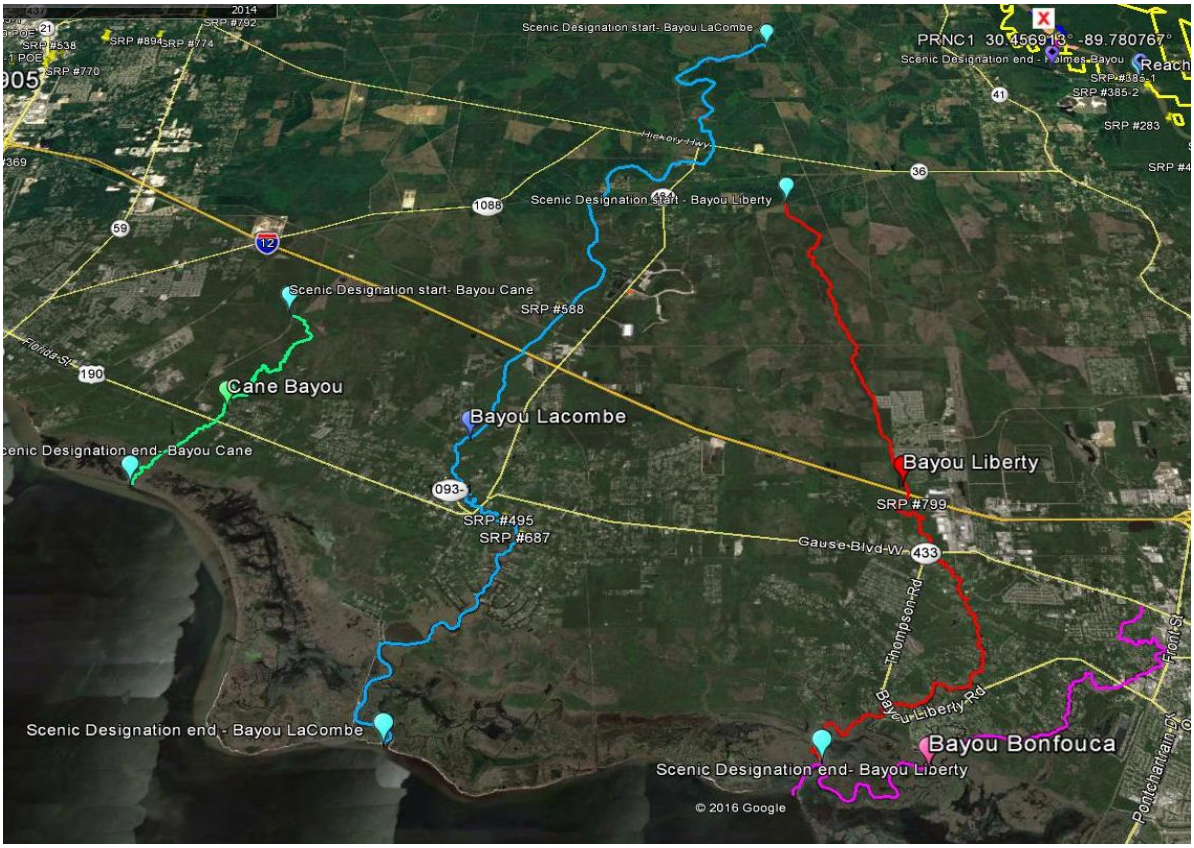

Figure 2. Bayou Lacombe Complex is comprised of four primary bayous, Bayou Lacombe, Cane Bayou, Bayou Liberty and Bayou Bonfouca.

APPENDIX II

(return to boat docks)

Figure 1. Public access boat launches in the Bayou Lacombe Complex.

APPENDIX III

(return to shoreline development)

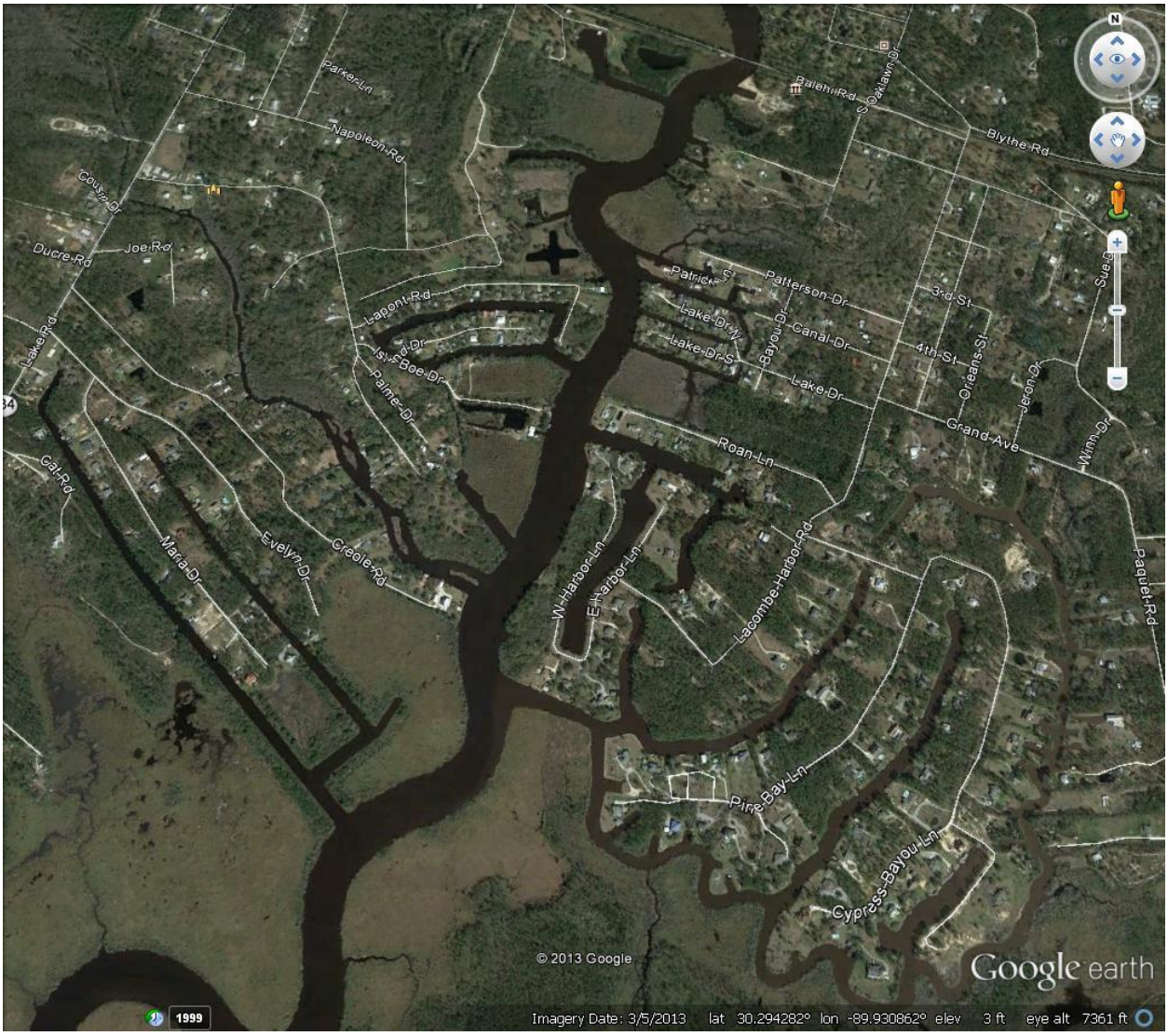

Figure 1. Residential development along Bayou Lacombe. (Image date 3/5/2013)

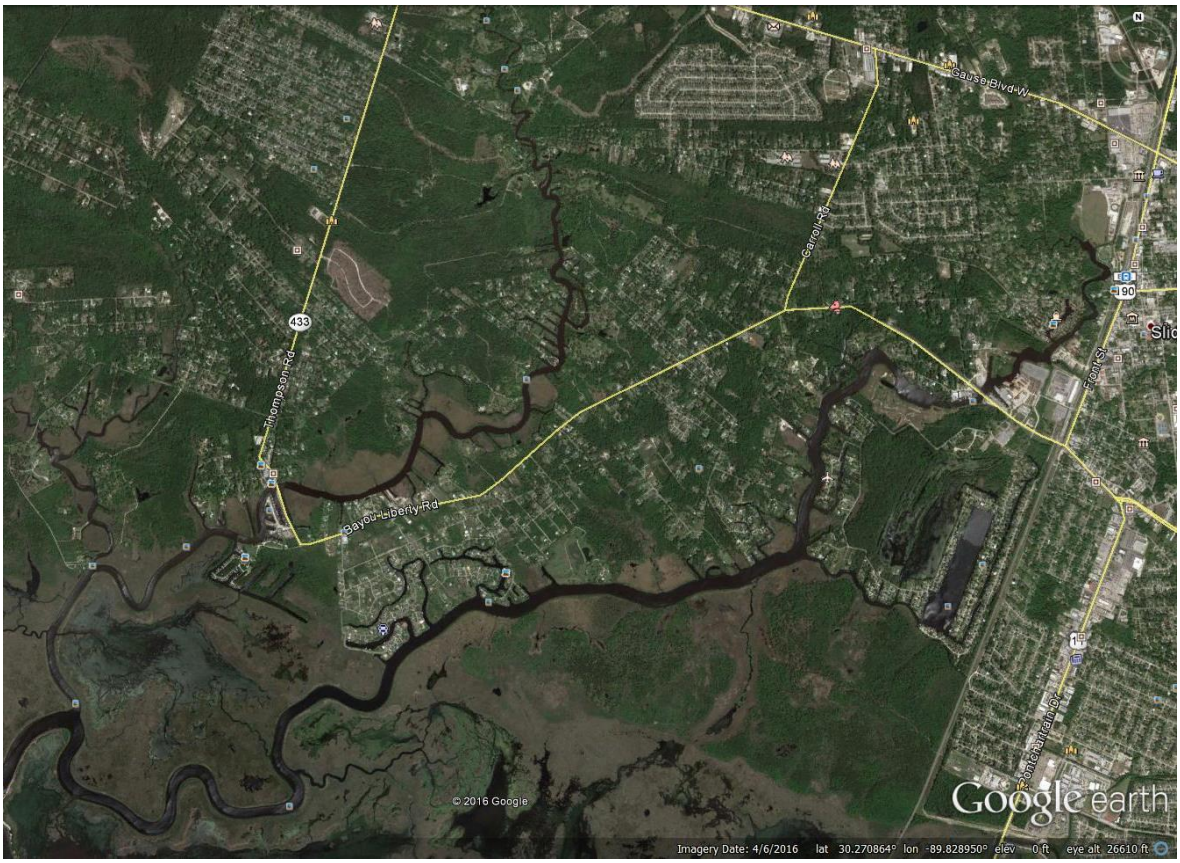

Figure 2. Residential development along Bayou Liberty and Bayou Bonfouca.

APPENDIX IV

(return to treatment)

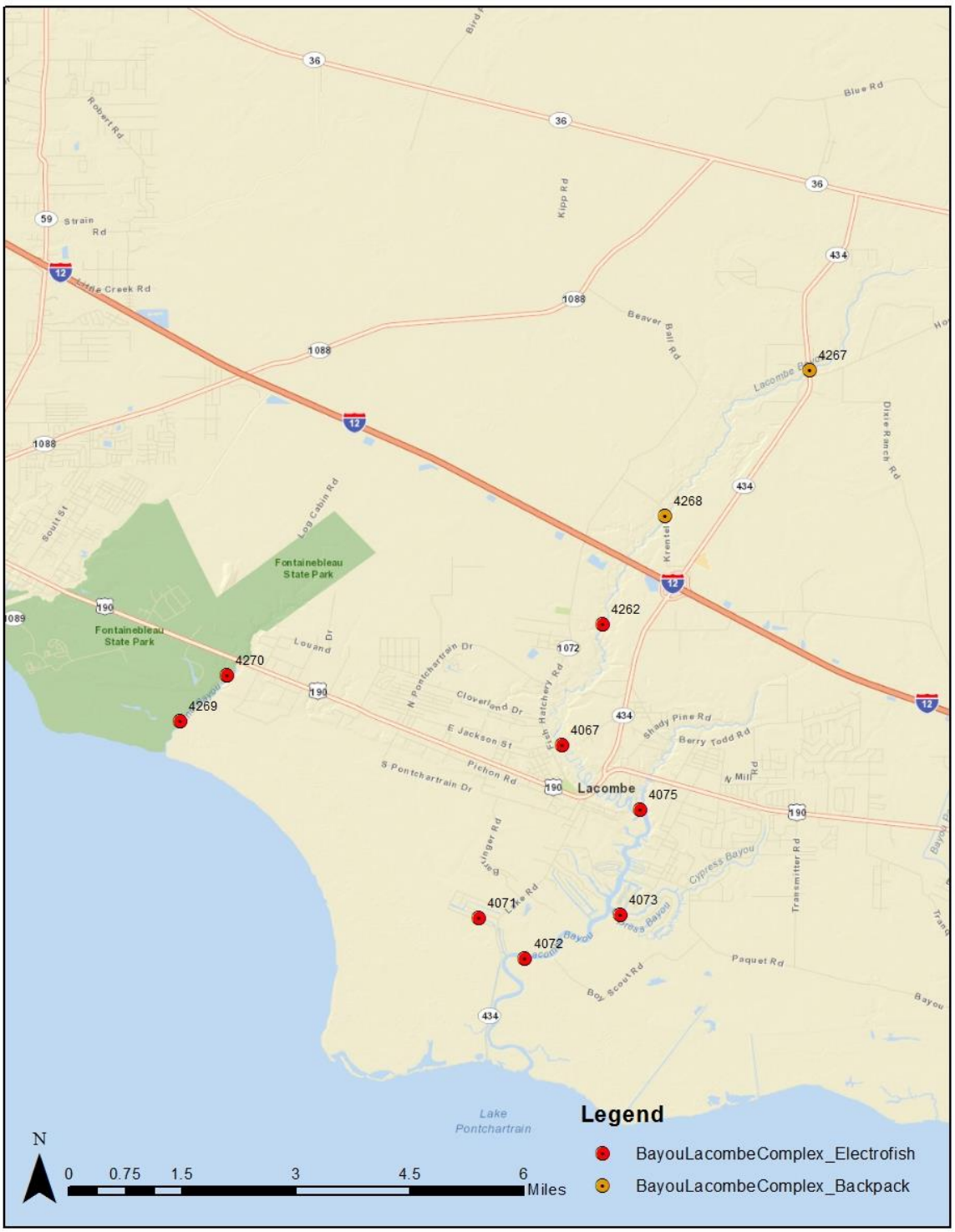

Figure 1. Sample sites for the western portion of the Bayou Lacombe Complex.

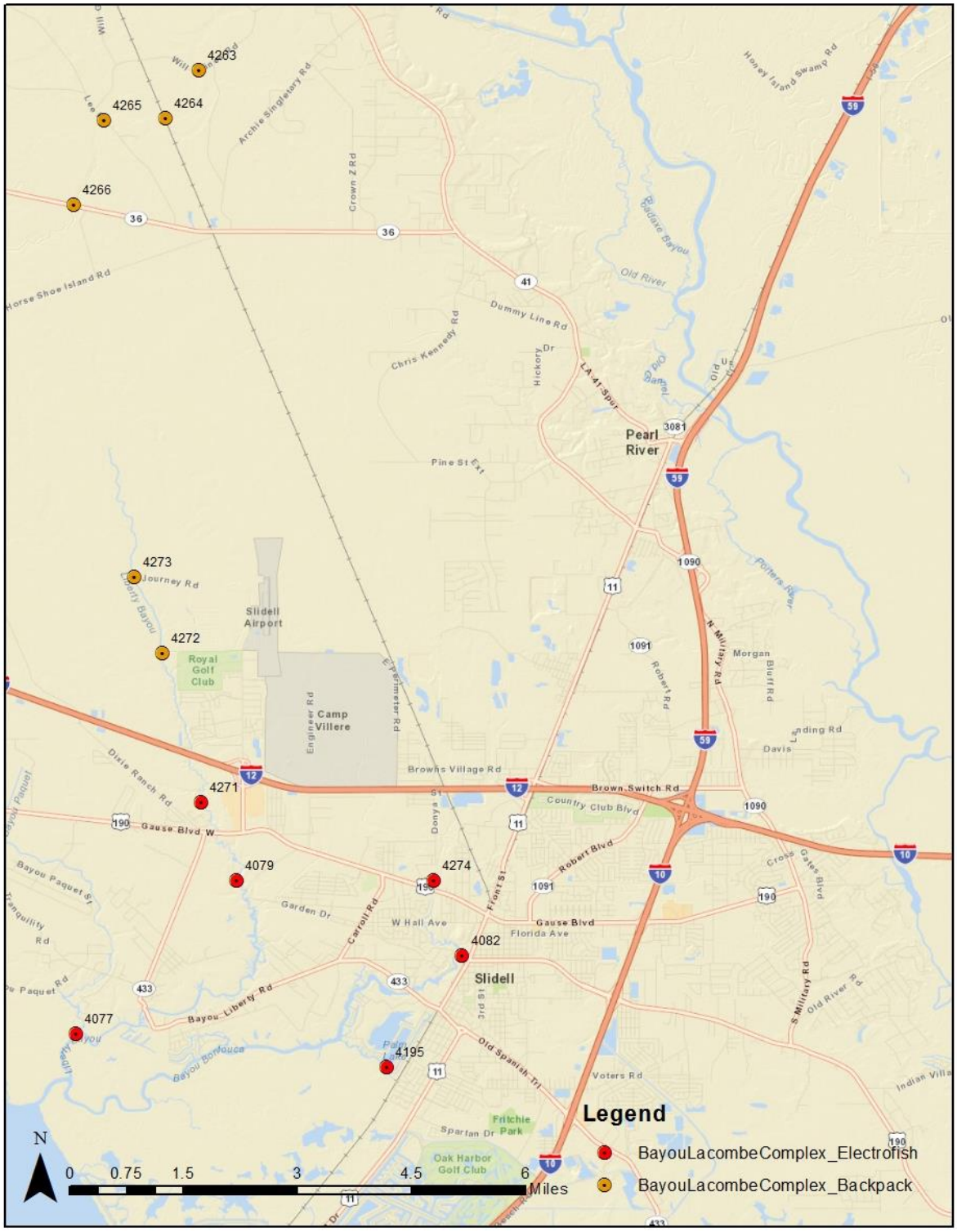

Figure 2. Sample sites for the eastern portion of the Bayou Lacombe Complex.