

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

BAYOU LACOMBE

LAKE HISTORY & MANAGEMENT ISSUES

CHRONOLOGY

October 2013 - Prepared by
Tim Ruth, Biologist Manager, District 8

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WATERBODY HISTORY

GENERAL INFORMATION

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](#)). 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. Largemouth bass, bluegill, redear sunfish, longear sunfish, warmouth, crappie, catfish, red drum, black drum, spotted seatrout, sand sea trout, flounder, sheepshead and croaker are targeted by anglers. Furthermore, many people recreationally and commercially fish for blue crab and bait species near the mouth of the bayou.

Watershed

The Bayou Lacombe Basin drains approximately 41,600 acres of land area.

Parishes Located

Bayou Lacombe is located in St. Tammany Parish in southeastern Louisiana.

Border Waters

The Bayou Lacombe basin is bordered on the west by Bayou Cane, to the east by Bayou Liberty and Bayou Bonfouca, and to 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 Bayou Lacombe. Bayou Lacombe is designated as a natural scenic stream 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 Bayou Lacombe. The Lake Pontchartrain Basin Foundation (LPBF) actively participates in a water quality task force. This task force monitors water quality in Bayou Lacombe and throughout

the Lake Pontchartrain Basin. For more information on LPBF activities please visit their website at: <http://www.saveourlake.org/>

ACCESS

Bayou Lacombe is accessible from Lake Pontchartrain and two boat launches. A Wallop-Breaux sponsored boat launch is located at Main St. in Lacombe, LA. The United States Fish and Wildlife Service (USFWS) own and maintain a launch near the mouth of the bayou on Lake Rd. in Lacombe, LA. Both are free of charge.

Boat docks

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](#)).

Main Street Launch: 30.309200°N, -89.929342°W

Lake Rd. Launch: 30.268444°N, -89.955891°W

Piers

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

Lake Rd. Launch: 30.268444°N, -89.955891°W

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.

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).

Shoreline development by landowners

The lower reach of Bayou Lacombe excluding Big Branch NWR is congested with residential development. Furthermore, manmade canals and natural bayous connected to the bayou have been developed for waterfront residences. ([APPENDIX III](#))

PHYSICAL DESCRIPTION

Shoreline length

Approximately 40 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. Submerged 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 affect also affect the density and composition of SAV.

Natural seasonal water fluctuation

The Bayou Lacombe Basin drains approximately 41,600 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. Van Vrancken's study compared fish assemblages with those described in Sobczak (1976). Hurricanes Katrina in 2005 and Gustav in 2008 were reported to have caused fish kills in Bayou Lacombe. However, no official investigations or quantitative estimates were conducted by LDWF. Silver carp achieved access to Bayou Lacombe via the Bonnet Carre Spillway opening in 2011. In 2013, giant salvinia was found in small quantities in Bayou Lacombe.

Aquatic Vegetation

Giant salvinia is now in the Bayou Lacombe drainage.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Type map

LDWF has not compiled a typemap for Bayou Lacombe

Biomass

No biomass sampling has been conducted

Treatment history by year available

Generally, floating and emergent vegetation requires minimal management to maintain boating access in residentially developed areas. Torpedo grass has been the primary nuisance vegetation. In the spring of 2013 several residents along the canals in the area reported alligator weed to be a nuisance. However, natural infestations of the alligatorweed flea beetle have successfully controlled the problem. In May 2013 giant salvinia was found in Bayou Lacombe. Less than 0.5 acres of plant material was found in a small manmade canal. The canal was boomed off in an attempt to isolate the infestation. Unfortunately, the plant had already spread to areas in the surrounding canals and marsh. Giant salvinia in Bayou Lacombe appears to be relatively slow growing. Since discovered, no tertiary stage plant material has been found. Plants found here typically measure between 0.5 and 1cm in size. Bayou Lacombe is known to have low fertility and does not support an abundance of floating plants. Initial herbicide applications of a glyphosate / diquat / surfactant mix were not proving effective. Small leaf size and slow growth were suspected of limiting the effectiveness of this mixture. Therefore, a mixture of diquat and surfactant only applied at a rate of 0.75 / 0.25 gallons per acre has been used. This mixture is applied with a low pressure sprayer to decrease droplet size and prevent washing the plant with excessive pressure. Results from this treatment have been promising. However, eradication of giant salvinia is not likely. Small giant salvinia plants are often hidden among emergent plants like torpedo grass and alligator weed. This can obscure the plant from herbicide applications. A Google Earth image depicting the extent of giant salvinia in the Bayou Lacombe area as of 10/20/2013 is found in [APPENDIX IV](#). Although the plant continues to spread it is found in relatively low densities (a fringe) and generally consists of primary stage plants.

Biological – None

Chemical – One hundred eighteen acres of nuisance aquatic vegetation have been treated since 2005 (Figure 1). No treatments were made in 2010 or 2012.

Table 1. LDWF herbicide treatments in Bayou Lacombe, LA from 2005-2013.

Year	Vegetation	Herbicide	Acres	Rate
2005	Duckweed	Reward / Surfactant	6	0.75gal/acre 0.25gal/acre
Total 2005			6	
2006	Alligator weed	2-4D	4	0.50gal/acre
2006	Pennywort	2-4D	9	0.50gal/acre
Total 2006			13	
2007	Alligator weed	Reward / Surfactant	2	0.75gal/acre 0.25gal/acre
2007	Pennywort	Reward/ Surfactant	8	0.75gal/acre 0.25gal/acre
2007	Torpedo grass	Reward/ Surfactant	9	0.75gal/acre 0.25gal/acre
Total 2007			19	
2008	Filamentous Algae	Reward/ Surfactant	7	0.75gal/acre 0.25gal/acre
2008	Alligator weed	Aquastar/ Surfactant	3	0.50gal/acre
2008	Alligator weed	Reward/ Surfactant	6	0.75gal/acre 0.25gal/acre
2008	Common salvinia	Aquastar/ Surfactant	2	0.50gal/acre
2008	Common salvinia	Reward / Surfactant	1	0.75gal/acre
2008	Sedge	Aquastar / Surfactant	7	0.50gal/acre
2008	Torpedo grass	Aquastar/ Surfactant	11	0.50gal/acre
2008	Torpedo grass	Reward/ Surfactant	26	0.75gal/acre 0.25gal/acre
Total 2008			63	
2009	Torpedo grass	Aquastar/ Surfactant	3	0.50gal/acre
Total 2009			3	
2011	Filamentous Algae	Knockout/ Surfactant	13	0.75gal/acre 0.25gal/acre
Total 2011			13	
2013	Giant salvinia	Glyphosate / Diquat / Surfactant Mix	1	0.75gal/acre 0.25gal/acre 0.25gal/acre
2013	Giant salvinia	Diquat / Surfactant	3	0.75gal/acre 0.25gal/acre
Total 2013			4	

HISTORY OF REGULATIONS

Recreational

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

FISH KILLS / DISEASE HISTORY

Naturally occurring kills of Gulf menhaden are common August - 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

LDEQ sub segment 040901 does not support fish and wildlife propagation. 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.

LDEQ sub segment 040902 does not 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:

Bayou Lacombe: Headwaters to US 190:

http://iaspub.epa.gov/tmdl_waters10/attains_waterbody.control?p_list_id=LA040901_00&p_cycle=2010&p_report_type

Bayou Lacombe US 190 to Lake Pontchartrain:

http://iaspub.epa.gov/tmdl_waters10/attains_waterbody.control?p_list_id=LA040902_00&p_cycle=2010&p_report_type

BIOLOGICAL

Fish samples

Inland Fisheries standardized electrofishing samples for largemouth bass (LMB) and crappie are collected from navigable areas of Bayou Lacombe (090401 and 090402). Twenty-nine standardized electrofishing samples for largemouth bass (LMB) and seven forage samples have been taken since 1996 (Table 1). 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 1. Sampling efforts for Bayou Lacombe, LA from 1996 – 2016

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)
2014	No fisheries samples scheduled.
2015	No fisheries samples scheduled.
2016	Electrofishing – 4 boat access stations (spring) 4 wadeable stations (summer)
	Seines - 1 beach seine at bayou mouth (summer) 3 small seines at wadeable portions (summer)

Stocking History

The Huey P. Long Fish Hatchery is adjacent to Bayou Lacombe and has been in operation since 1931. Over time, several species of fish have no doubt made their way into the bayou. However, recent records indicate only 3,486 Florida largemouth bass (FLMB) have been stocked by LDWF since 2005 (Table 2).

Table 2. 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) and LDWF standardized electrofishing results, a list of fish species found in Bayou Lacombe is listed in Table 3.

Table 3. Fish species list for Bayou Lacombe, Louisiana

Scientific Name	Common Name
<i>Atractosteus spatula</i>	Alligator gar
<i>Lepisosteus oculatus</i>	Spotted gar
<i>Lepisosteus osseus</i>	Longnose gar
<i>Amia calva</i>	Bowfin
<i>Anguilla rostrata</i>	American eel
<i>Brevoortia patronus</i>	Gulf menhaden
<i>Dorosoma cepedianum</i>	Gizzard shad
<i>Dorosoma petenense</i>	Threadfin shad
<i>Esox americanus</i>	Grass pickerel
<i>Notemigonus crysoleucas</i>	Golden shiner
<i>Notropis texanus</i>	Weed shiner
<i>Minytrema melanops</i>	Spotted sucker
<i>Erimyzon sucetta</i>	Lake chubsucker
<i>Erimyzon tenuis</i>	Sharpfin chubsucker
<i>Ictalurus furcatus</i>	Blue catfish
<i>Ameiurus natalis</i>	Yellow bullhead
<i>Ameiurus nebulosus</i>	Brown bullhead
<i>Ameiurus melas</i>	Black bullhead
<i>Aphredoderus sayanus</i>	Pirate perch
<i>Fundulus chrysotus</i>	Golden topminnow
<i>Fundulus nottii</i>	Bayou topminnow
<i>Fundulus grandis</i>	Gulf killifish

<i>Lucania parva</i>	Rainwater killifish
<i>Gambusia affinis</i>	Mosquitofish
<i>Heterandria formosa</i>	Least killifish
<i>Labidesthes sicculus</i>	Brook silverside
<i>Menidia beryllina</i>	Inland silverside
<i>Elassoma zonatum</i>	Banded pygmy sunfish
<i>Centrarchus macropterus</i>	Flier
<i>Pomoxis nigromaculatus</i>	Black crappie
<i>Micropterus salmoides</i>	Largemouth bass
<i>Lepomis gulosus</i>	Warmouth
<i>Lepomis megalotis</i>	Longear sunfish
<i>Lepomis symmetricus</i>	Bantam sunfish
<i>Lepomis miniatus</i>	Red spotted sunfish
<i>Lepomis macrochirus</i>	Bluegill sunfish
<i>Lepomis microlophus</i>	Redear sunfish
<i>Lepomis marginatus</i>	Dollar sunfish
<i>Etheostoma parvipinne</i>	Goldstripe darter
<i>Mugil cephalus</i>	Striped mullet
<i>Trinectes maculatus</i>	Hogchoker

Genetics

Florida largemouth bass have been introduced to Bayou Lacombe. However, no genetic sampling has been conducted to confirm subsequent.

Threatened/endangered/exotic species

The following are species of conservation concern in the Pontchartrain Basin which includes Bayou Lacombe: 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 Bayou Lacombe via the Bonnet Carre Spillway opening in 2011.

CREEL SURVEYS

Historic information

LDWF has not conducted a creel survey of Bayou Lacombe.

HYDROLOGICAL CHANGES

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

WATER USE

Hunting

Bayou Lacombe 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

Bayou Lacombe 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)

References

- Lester, Gary D., S. G. Sorensen, P. L. Faulkner, C. S. Reid, and I. E. Maxit. 2005. Louisiana Comprehensive Wildlife Conservation Strategy. Louisiana Department of Wildlife and Fisheries. Baton Rouge. 455 pp.
- Sobczak, M. T. 1976. Physical and chemical factors affecting the distribution and occurrence of fishes in Bayou Lacombe, Louisiana. Unpublished dissertation, Tulane University, New Orleans, Louisiana. 99 pp.
- Van Vrancken, Jeffrey M. 2007. "Short and Long-term Changes in the Fish Assemblages of Bayou Lacombe, Louisiana". *University of New Orleans Theses and Dissertations*. Paper 620 pp.

APPENDIX I

[\(return to general\)](#)

Map Image Bayou Lacombe

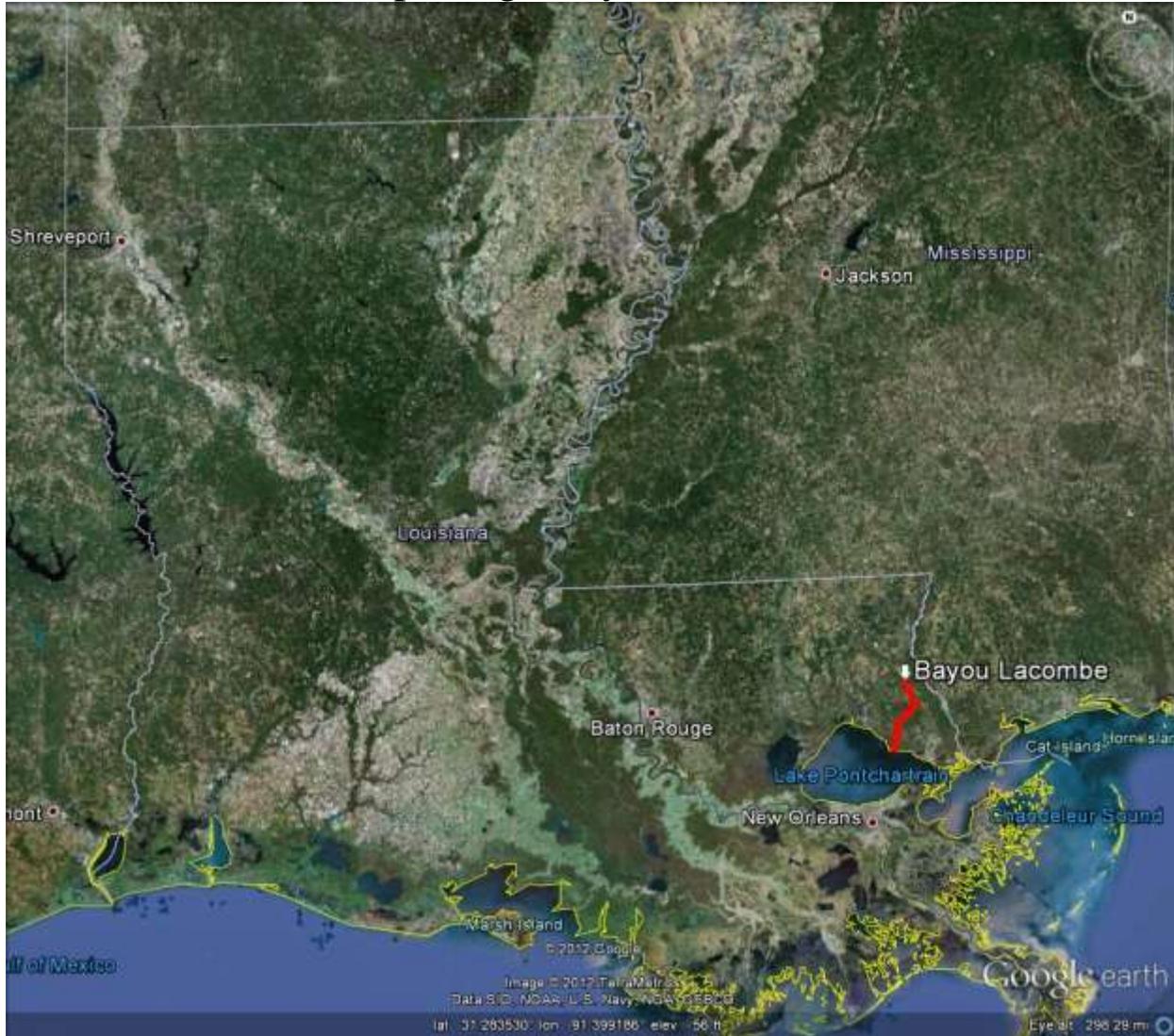


Figure 1. Google Earth image depicting Bayou Lacombe in southeast Louisiana (image date 11/2011).

APPENDIX II

[\(return to boat docks\)](#)

Map Image of Boat Ramps

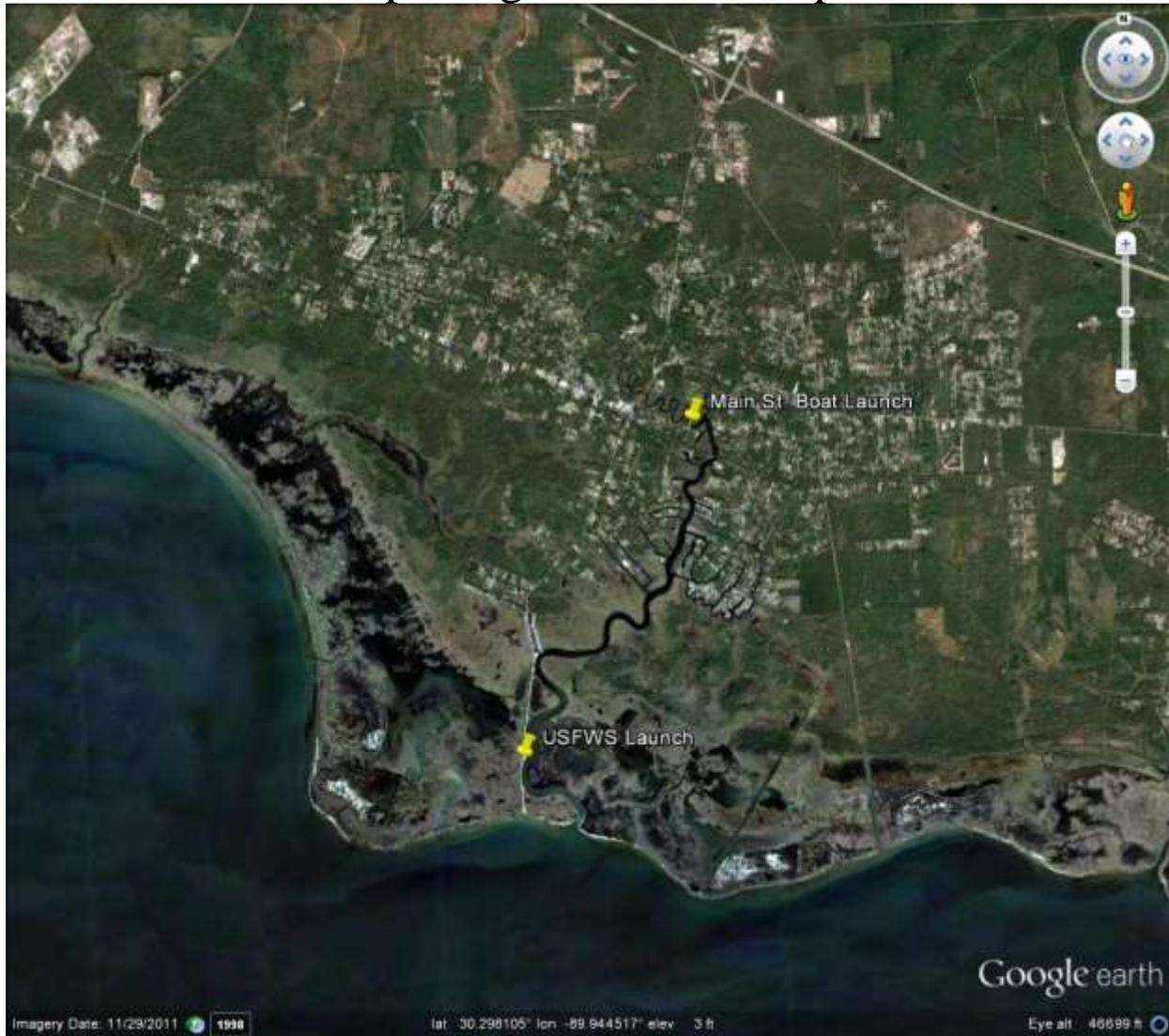


Figure 2. Google Earth image depicting public access boat launches in Bayou Lacombe (image date 11/2011).

