FALSE RIVER WATERSHED

INTERIM REPORT ON HCR 168 OF 2011

REGULAR LEGISLATIVE SESSION

Prepared by:

Louisiana Department of Natural Resources
and
Louisiana Department of Wildlife and Fisheries

March 2012

Table of Contents

List of Figures

List of Tables

List of Appendices

1. Background Information/Problem Statement:

In 2011, House Concurrent Resolution (HCR) No. 168 urged and requested that the Louisiana Department of Natural Resources (LDNR), in conjunction with the Pointe Coupee Parish Police Jury (PCPJ), assumes the role of lead project sponsor for the "False River Aquatic Resources Ecosystem Restoration Project" and coordinates with other state agencies, local governmental agencies, and stakeholder groups in order to help expedite the efforts by the U.S. Army Corps of Engineers-New Orleans District (USACE) to restore the False River ecosystem. This report was prepared pursuant to that directive.

False River is an abandoned meander of the Mississippi River (Figure 1). The cut-off began prior to 1699 and was well established by 1719. Alterations along this oxbow lake and within this oxbow lake's watershed have resulted in deterioration of the water quality, aquatic vegetation and fisheries. The extent of the False River watershed is shown on the report's front cover.

Based upon a rapid survey of available information the following timeline can be established:

1948 The False River drainage control structure on the outlet channel (a.k.a. Lighthouse Canal) is built to control the lake stage. The weir has a fixed elevation of 15.0 feet above mean sea level (MSL) with a maximum height of 20.96 ft. MSL with stop logs. Approximately 12,000 acres (71%) of The Island is not being used for agricultural purposes.

1969 U.S. Soil Conservation Service's (SCS) Bayou Grosse Tete Watershed study and the design survey for the M-1 Canal (a.k.a. Discharge Bayou) are started.

1973 Most of the land enclosed in the oxbow lake (a.k.a. The Island) is cleared and drained, and was being converted to soy bean cultivation.

1976 Bayou Grosse Tete Watershed study is completed, a report entitled "Watershed plan and Environmental Impact Statement for Watershed Protection, Flood Prevention, and Drainage, Bayou Grosse Tete Watershed, Pointe Coupee Parish, Louisiana" is published, and the work plan approved by the U.S. Congress.

1977 U.S. Environmental Protection Agency (USEPA) describes the lake as eutrophic with severely low dissolved oxygen levels in the summer.

1981 U.S. Natural Resources Conservation Service (NRCS) completes installation of the M-1 and M-2 Canals, and the associated sediment basins. As-built drawings of the M-1 canal and its sediment basin are drafted.

1983 Bayou Grosse Tete Watershed Project is completed. Only ~5,000 acres (28%) of The Island remains un-cultivated.

1980s Peak crop production occurs on The Island. Approximately 75% of The Island is under agricultural use.

1989 Louisiana Department of Transportation and Development (LDOTD) replaces the stop-logs with three 5x8 feet (ft.) sluice gates with invert elevation of 10 ft.

1999 PCPJ excavates a large amount of silt (>10,000 cubic yards) from the sediment basin.

1993 LDOTD approves an increase in pool level from 15 to 16 ft. MSL for part of the year.

1998 U.S. Geological Survey (USGS) performs a bathymetry survey of the lake.

2001 USACE proposes the False River Aquatic Ecosystem Restoration Study.

2003 USACE estimates that 28,000 tons of silt is being deposited into False River annually.

2005 NRCS surveys the M-1 Canal sediment basin and install fencing along parts of the M-1 Canal.
2006 PCPJ excavates approximately 8,000 to 10,000 cubic yards of silt from the sediment basin.
2010 PCPJ excavates 1,200-1,500 cubic yards of silt from the sediment basin.
2010 Louisiana Department of Wildlife and Fisheries (LDWF) proposes a fall/winter drawdown of the lake to 10' MSL.
2011 Plans for a drawdown are called off.
2011 NRCS estimates that approximately 21,000 tons of sediments is being lost to erosion from crop and pasture land in the False River watershed.
2011 The Louisiana Legislature requests the involvement of LDNR in conjunction with the PCPJ to assume the lead project sponsor for the False River Aquatic Resources Ecosystem Restoration Project.
2011 LDNR meet with Representative Thibaut, author of HCR No. 168, and with representatives of the PCPJ, the LDWF, the USACE and its contractor and NRCS to discuss the status of the project.
2012 LDNR prepares a report in accordance with HCR-168 of 2011.

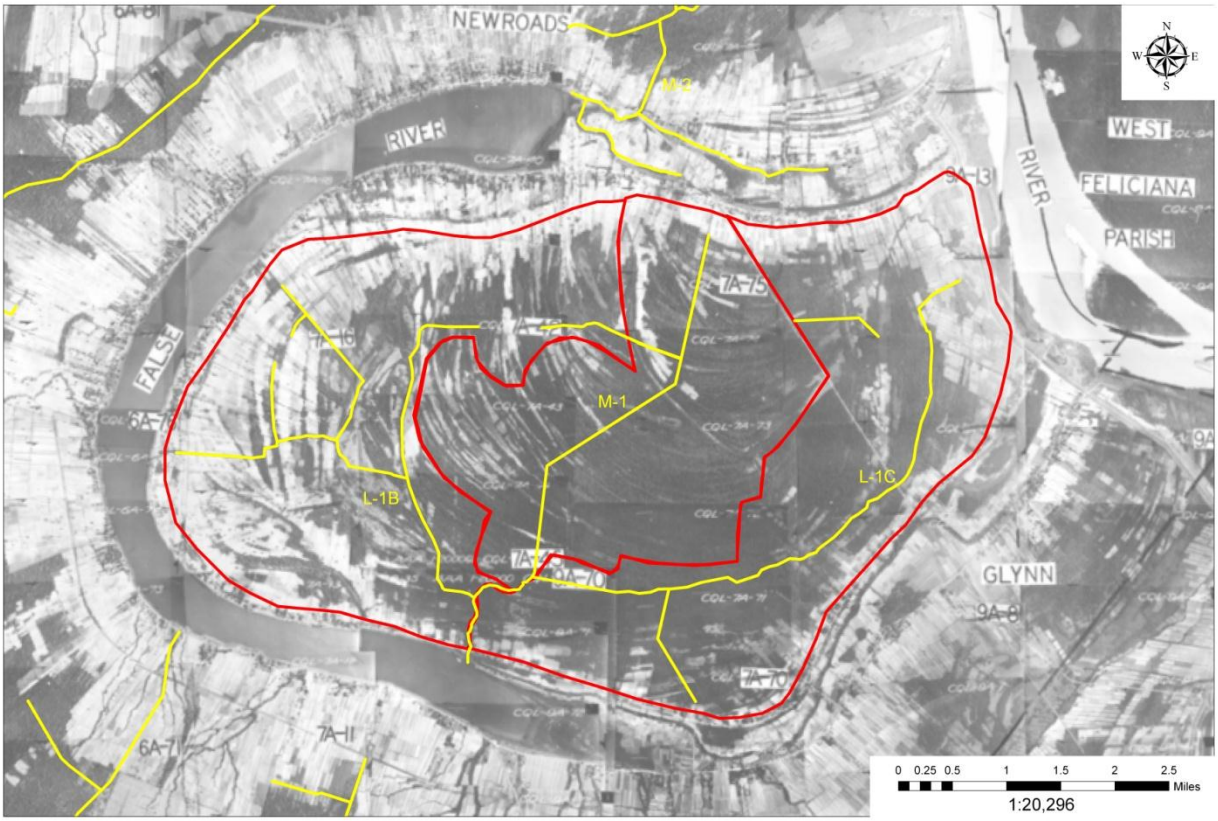


Figure 1: Early 1940s aerial photograph of False River and The Island. The canals are labeled in yellow and the sub-basins in red.

The LDWF's management plan for False River (Appendix A and B) indicates that the Grosse Tete Watershed Project and the resulting increased sedimentation caused a significant deterioration of spawning habitat and the loss of aquatic vegetation in the lake. LDWF also pointed to the stratification of the lake and the management of the outlet structure for flood control purposes as further causes of imbalance in the system. LDWF suggests that water fluctuation to the extent feasible to mimic the historic natural regime will provide habitat related benefits and resulting improvements to fisheries resources. Maintenance and improvement/ enhancement of the existing sediment trap and revision of agricultural practices would be beneficial corrective actions.

2. Existing/On-going Actions

Several actions have been taken to rectify some of the problems that resulted from the implementation of the Bayou Grosse Tete Watershed Project. Those actions include maintenance of the sediment trap on the M-1 Canal (Figures 1 and 2), fencing and channel stabilization (Figure 2), conversion of large tracts from crops to pasture, and the planned conversion of pasture to a mitigation bank. These actions continue to be implemented to improve and stabilize conditions and have played a significant role in reducing the amount of sediment that is deposited into the lake from this system. In the late 1990s and early 2000s, the PCPJ investigated the source of elevated fecal coliform counts measured in the lake's water (Figure 3). The PCPJ and other stakeholders remedied the sources identified by repairing and extending sewers. As shown on Figure 3, fecal coliform exceedences were more common prior to 2004 and have not been observed since. In addition, the Louisiana Department of Health and Hospitals (LDHH) is requiring the update of individual waste treatment systems when a property transfer occurs. Furthermore, recently the PCPJ has made an application to LDHH in order to finance the expansion of sewer service around all the lake.

2.1. Proposed USACE False River Aquatic Resources Ecosystem Restoration Project

The USACE has been studying options for False River under their Continuing Authority Program (CAP) Section 206 Aquatic Ecosystem Restoration. The Section 206 Project Restoration Plan was completed in August 2002 and approved by the Mississippi Valley District of the USACE in January 2003. The Feasibility Study was started, but remained unfunded during fiscal year 2005 through 2008. The Feasibility Study evaluated several management measures, as follows:

1. Manage in-coming Non-Point Source Pollution (NPSP)
    - Best Management Practices (BMPs)
    - Stabilize erosive channels
2. Dredge accumulated sediments within the lake
    - Dredge flats with upland disposal
    - Dredge flats with island creation via material disposal
    - Dredge flats with material disposal in deeper portions of the lake
3. Lake water-level management
4. Vegetation plantings

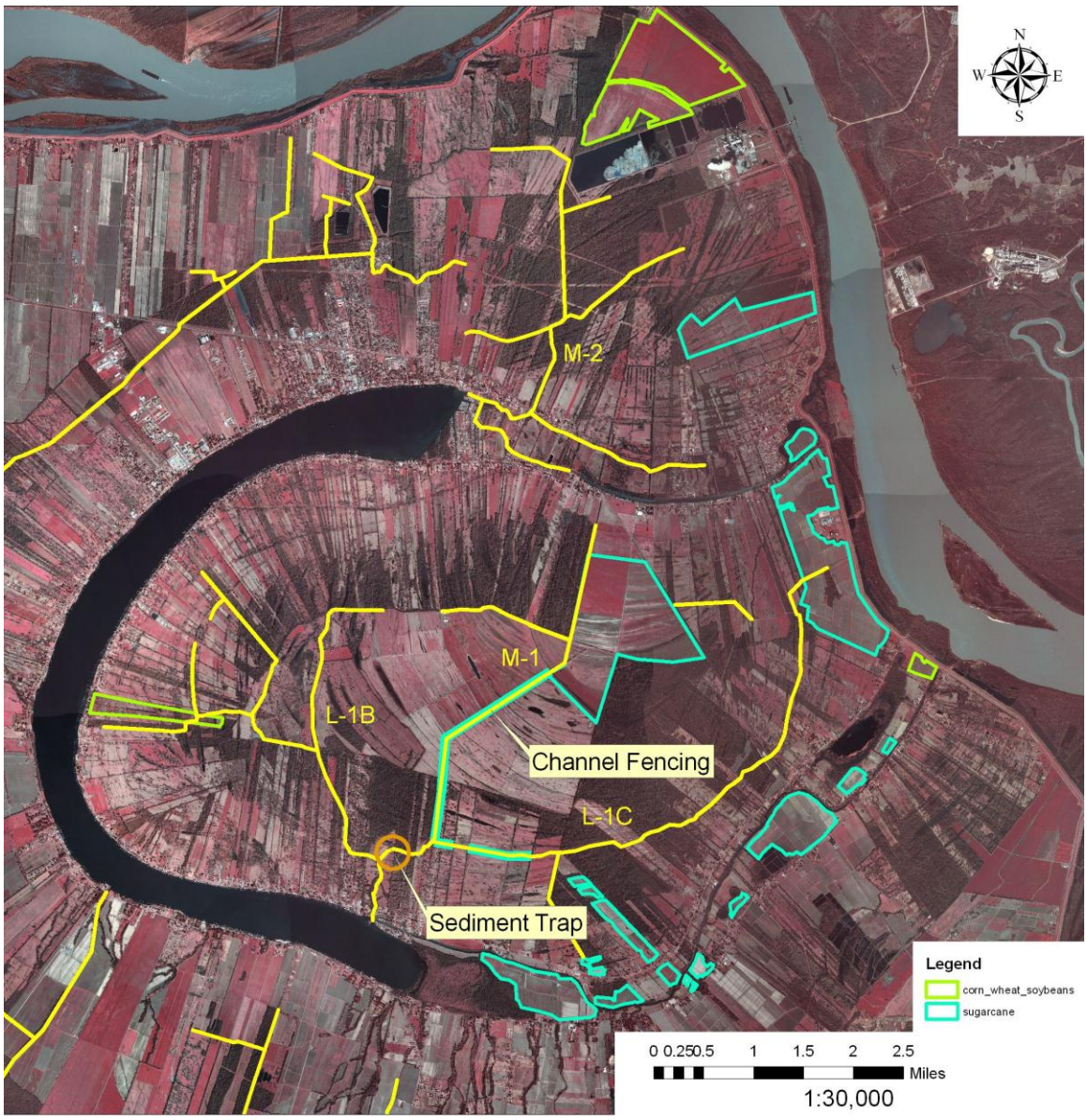


Figure 2: 2004 satellite image of False River.
(The canals are shown and labeled in yellow, and the section of canal that was fenced is labeled in green)

The USACE is currently working on a final report which is projected to be completed by February 2012. Early indications are that the USACE is currently investigating the dredging of the north and south flats of the lake for island creation and establishment of aquatic "edge" habitat as a potential management measure. The lake water-level management measure was dropped because the study associated with it was deemed too expensive. Natural stream design for reducing in-coming NPSP is not currently included as a measure in the preliminary proposed plan, and vegetation planting is limited to created islands. The estimated cost of the project would be $7,700,000 ($5,000,000 Federal and $2,700,000 non-Federal). Depending on funding availability, the USACE could start the restoration project in as soon as 2 years and the project would take 3.5 years to complete.

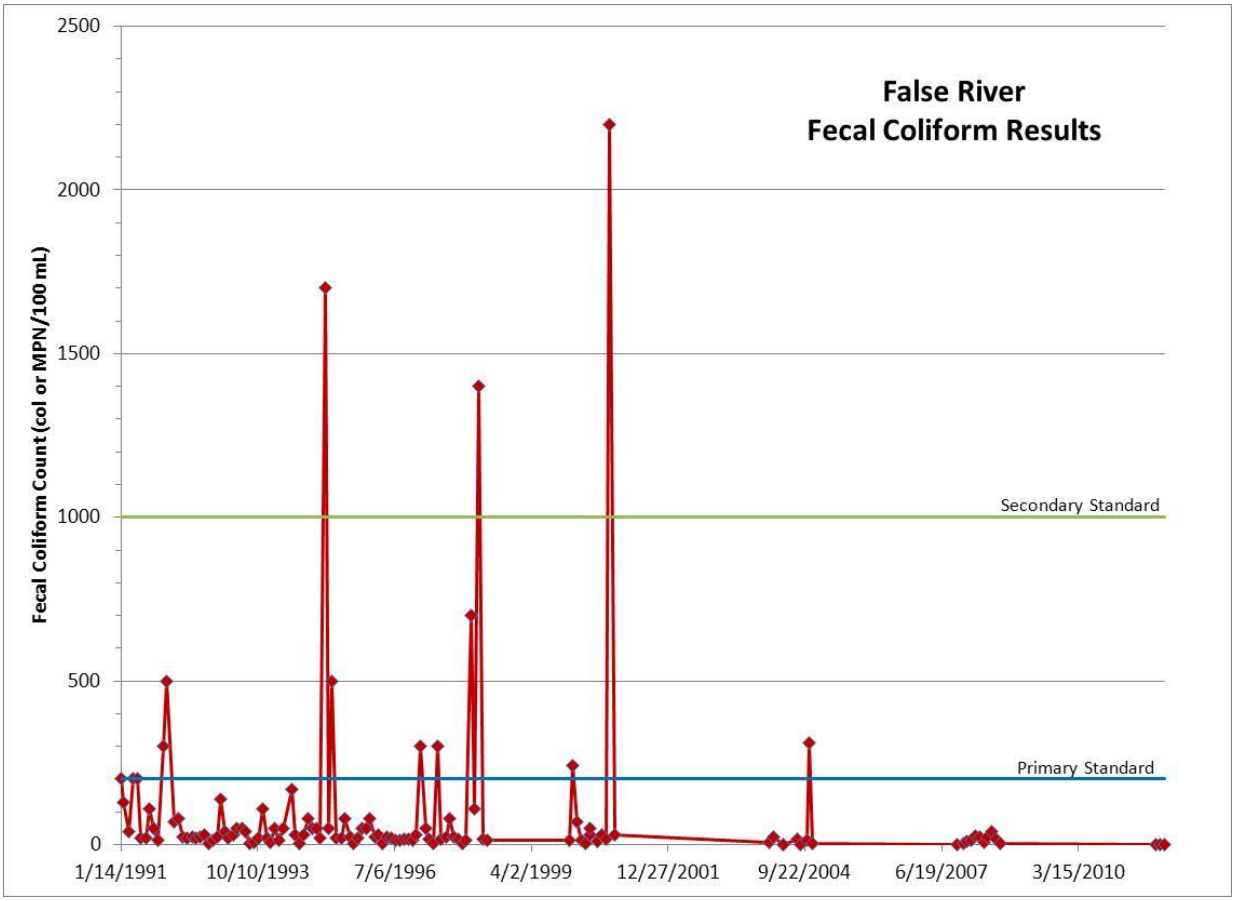


Figure 3: Fecal coliform count in False River over time.
[Source: Louisiana Department of Environmental Quality (LDEQ) Ambient Water Quality Program]

2.2. M-1 Canal Sediment Basin

The existing M-1 Canal sediment basin is approximately 520 feet long by 16 feet wide and 7 feet deep. It was built by NRCS in 1981 (Figure 4). The 1976 Bayou Grosse Tete Watershed report shows that the M-1 canal was designed to the specifications presented in Table 1. It is noted in the report that the M-1 Canal system was excavated in an area where the "allowable velocities for unprotected earth channel" criteria were not met, because of the presence of a "silty stratum."

Limited information is available regarding the flux of sediment into False River. Turbidity and Total Suspended Solids (TSS) data are available for the lake in the late 1970s, 1990s and sporadically since (Figure 4). Data are not available for the period during which the M-1 Canal was installed and The Island reached peak crop production. The data show that in the 1990s, after the M-1 Canal Sediment Basin was installed, a period of elevated turbidity and TSS sporadically remained. The PCPJ excavated a large amount of silt (>10,000 cubic yards – volume not recorded) from the sediment basin in 1999. In 2005, the NRCS surveyed the sediment basin and in 2006 the PCPJ excavated approximately 8,000 to 10,000 cubic yards of silt from the sediment basin. In 2010, the PCPJ excavated an additional 1,200 to 1,500 cubic yards of silt from the sediment basin.

2.3. M-1 Canal Channel Improvements/Bank Stabilization

The NRCS, in collaboration with the PCPJ, has been stabilizing portions of the channel of the M-1 Canal, as well as installing cattle fencing along its course (Figure 2). Fencing has been installed along approximately 11,000 feet of the canal, and channel bank improvement has been performed on 6,500 feet. These efforts continue as problem areas are identified and funding to perform work is made available.

2.4. The Island Land Use Change

The conversion of tracts of land on The Island from forested to cropland resulted in a pulse of sediment entering False River during the 1980s (Figures 1 and 2). At its peak, approximately 16,000 acres, or 75% of The Island was in crop. In the recent past, the amount of cropland has been reduced substantially due to conversion to pastureland. In 2011, NRC reported that 2,300 acres of The Island was in crop and 27,000 acres was in pastureland and woodland. Of the cultivated land, 1,200 acres was in sugar cane and another 1,100 acres was in a soy beans, wheat and corn rotation (Figure 2). This represents approximately 14% of the available agricultural land that was cultivated in the late 1980s. More recently, a portion of The Island has been proposed as a site for the establishment of a mitigation bank for offsetting wetland impact by activities authorized under Section 404 of the Federal Clean Water Act. This would further rehabilitate a portion of agricultural land and further address sediment runoff issues (e.g. NPSP) involving False River.

3. Interim Actions to be Considered

Actions under consideration are those actions evaluated to further address the impact of the Bayou Grosse Tete Watershed Project and other alterations, and to provide for water quality and habitat improvement in the lake. These actions include habitat improvement, and assessment and/or hydro modification of The Island's drainage network. Both the USACE in its Preliminary Restoration Plan (PRP) and the LDWF in its Water Body Management Plan (Appendix A and B) suggested that siltation mitigation should be addressed as part of restoration efforts.

3.1. The Island Drainage Network Assessment

The drainage network (Figure 5) of The Island has been identified as a principal contributing source to the deterioration of the water quality and fisheries in False River in the past. Although it is observed that action described in Section 2 of this report have improved the situation, additional actions could further improve existing conditions.

3.1.1. Drainage Network Assessment

The hydraulic characteristics of the M-1 Canal are poorly known and only anecdotal information is available regarding the trapping efficiency of the M-1 Canal Sediment Basin (Table 1 and Figure 6). Information is needed to determine the effectiveness of the modifications to further reduce sedimentation (e.g. siltation and turbidity) from this source. The information needed includes the response of the M-1 Canal drainage network to storm events of different magnitude with respect to stream discharge, flow velocity, water turbidity and total suspended solid load.

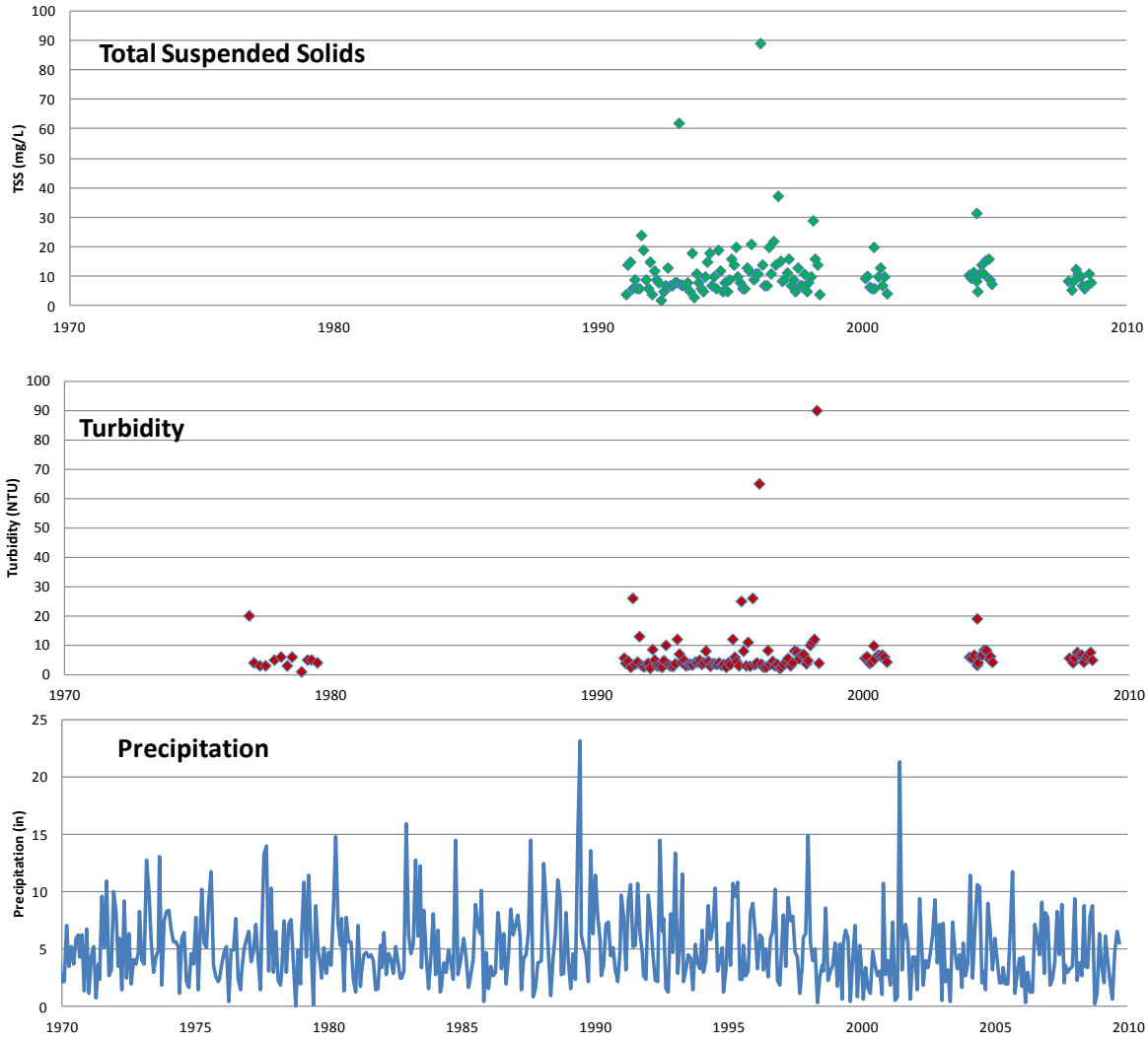


Figure 4: Comparison of precipitation versus TSS and Turbidity in False River (1970 – 2010). (Source: LDEQ Ambient Water Quality Program and National Climatic Data Center Baton Rouge Ryan Airport monthly precipitation values)

Table 1: M-1 Canal design specifications

Parameter	Value
Drainage area	32.94 mi^2
Capacity	884 ft^3/sec
Length	5.15 mi
Hydraulic gradient	0.00035 to 0.00010 ft./ft.
Channel bottom width	8-44 ft.
Channel bottom grade	0.01-0.08 %
Flow depth	2.1-8.5 ft.
Side slope	1.5:1
Velocities	1.87-3.60 ft./sec

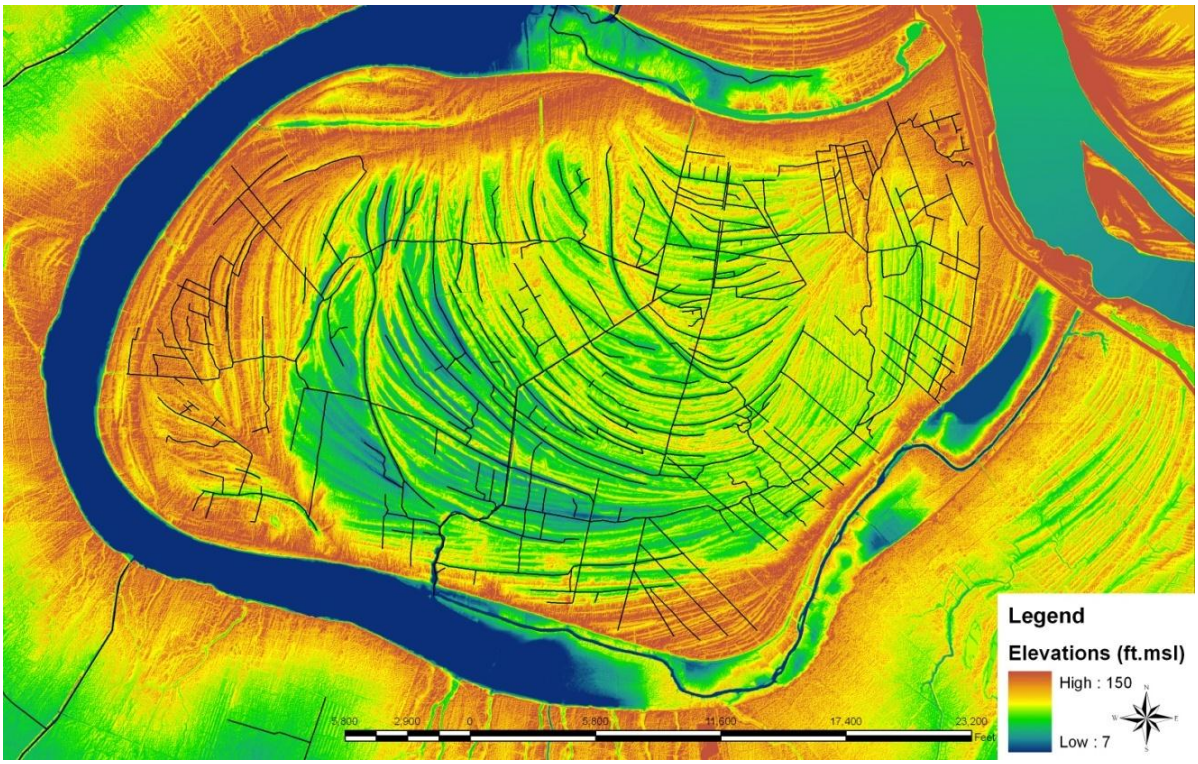


Figure 5: 1999 Light Detection and Ranging (LIDAR) imagery of False River and The Island's drainage network.

3.1.2. Drainage Network Hydromodification

The agricultural use of the Island has substantially changed since the M-1 Canal was constructed. Most of the cropland has been converted to pasture. With the anticipated establishment of a wetland mitigation bank on The Island, it is expected that additional benefit will be gained from the change in land use. Several types of modifications (i.e. BMPs) are available to retard flow and increase the trapping efficiency of the existing sediment basin, such as:

- Scheduled monitoring and maintenance of the existing sediment basin
- Monitoring the condition of the channel banks
- Completing the fencing of the channel
- Installing vegetation filter/buffer strips within the channel
- Implementing Channel modification to include vegetated terraces (e.g. two-stage ditch)
- Establishing of vegetated swales
- Implementing storm flow retardation/retention/restriction (e.g., install culverts, submerged rock weir, etc.)
- Enlarging of the existing sediment basin
- Altering the cross section of the sediment basin to add "soft- edge" treatment (e.g., increase capacity by installing vegetated terraces that flood at higher flow)

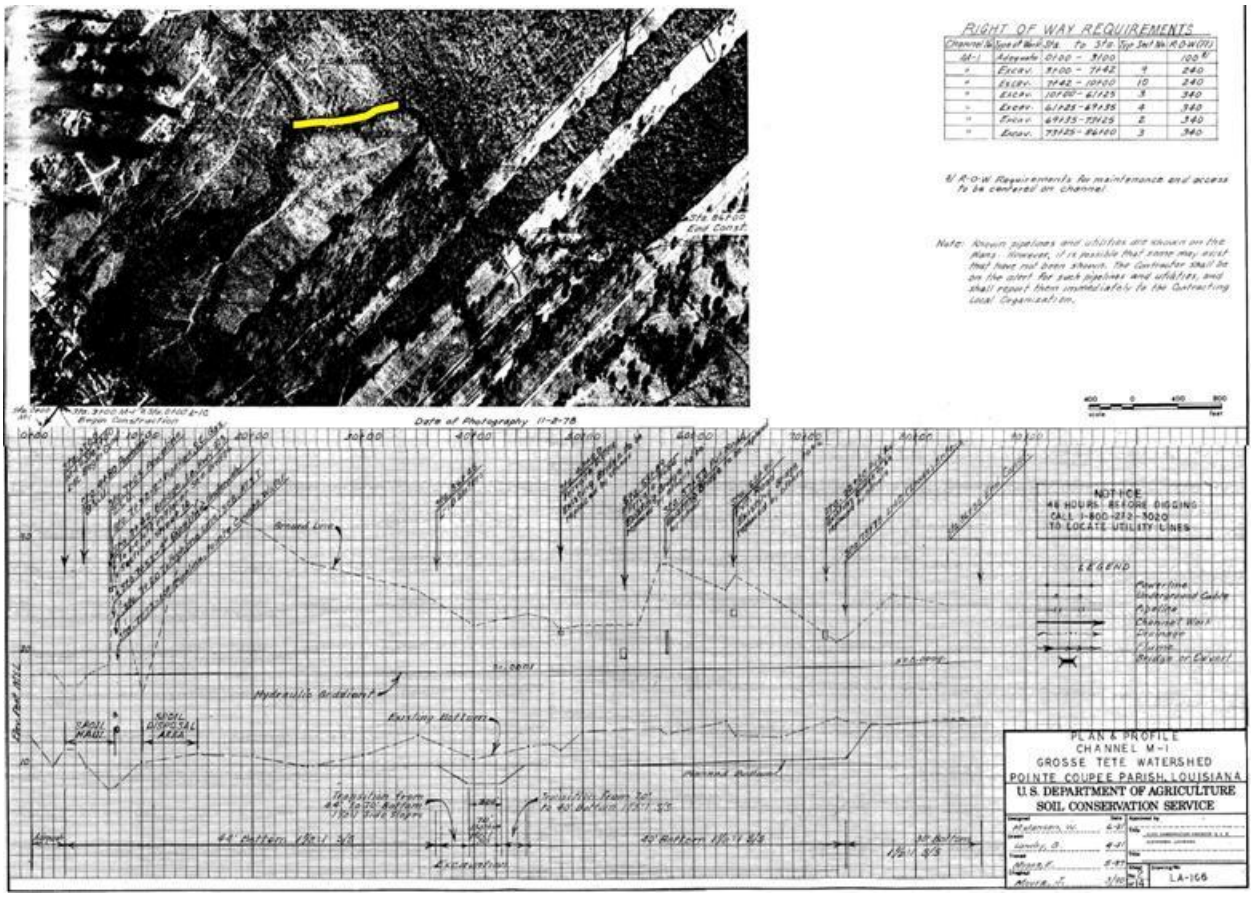


Figure 6: As-built plans of the M-1 Canal sediment basin (source: SCS)

3.1.3. Channel and Sediment Basin Maintenance

Maintenance of the sediment basin (Figure 6) and monitoring of the M-1 Canal drainage network has historically been irregular. Best Management Practices (BMPs) need to be established for routine inspection, maintenance and upgrade of the drainage network. These activities could be performed by the PCPJ to further improve the lake's aquatic environment (e.g. water quality), therefore enhancing fish habitat in the lake. The success of this interim action would be enhanced if it was performed in coordination with NRCS activities and wetland bank mitigation development. It is recommended that an agreement be entered into with the USACE so that the work performed could subsequently be used as cost share match for the USACE's longer term effort.

3.2 Habitat Improvement

Aquatic vegetation has declined and siltation of old shell beds in the lake since the completion of the Bayou Grosse Tete Watershed Project has significantly impacted fish habitat in the lake. An earlier attempt (2000) at re-establishing submerged native vegetation was unsuccessful. From discussions with LDWF, several small projects have been identified to improve aquatic habitat

and water quality, and angler success. Those include artificial reefs, fish spawning beds, aquatic vegetation plantings and seasonal water fluctuation.

3.2.1 Artificial Reefs

LDWF has determined that False River is currently lacking in complex cover. Currently, approximately 10% of the lake has complex cover. The loss of complex cover has been associated with the declining amount of submersed vegetation. A range of 15% to 30% aerial coverage of complex cover is considered optimal for sport-fish habitat. Complex cover in False River is limited to man-made structures, including piers and structures placed in the lake by anglers, and 15 acres of southern naiad in the south flats. In an effort to increase future angler success rate, the addition of artificial complex cover will be considered. LDWF personnel provided the following estimated cost for the construction of 11 reefs (Figure 7) comprised of 75 structures each. These reefs would provide False River with much needed fish habitat.

The estimated cost to build the 11 artificial reefs provided by LDWF is as follows:

- Cost/structure deployed: $25
- Structure cost: $20,625
- Mooring buoys with anchors and rigging: $1,550 ea. (two buoys per reefs). Total buoy cost: $34,100
- Total Artificial Reef Costs: $ 54,750

3.2.2 Fish Spawning Beds

LDWF has determined that siltation, particularly on the north and south flats, has minimized spawning habitat for nesting fish. The old shell beds that once served as excellent substrate for redear sunfish spawning have been silted over since the completion of the Bayou Grosse Tete Watershed Project. LDWF has provided the following estimated cost for the construction of ten fish spawning beds. The spawning bed pads would be constructed of washed gravel spread over ten suitable sites throughout the lake. Beds should be installed in areas of the lake where substrate is of sufficient quality to support the weight of the beds and thereby prevent the structures from sinking and being covered by fine grained sediments. LDWF has estimated that the cost per constructed bed would be $1,500, or a total cost of $15,000 for ten beds.

3.2.3 Aquatic Vegetation Plantings

Vegetation along the shoreline of False River has diminished and the planting of replacement aquatic vegetation beds has been identified as a mechanism to promote improvement in the lake's fisheries and water quality. New aquatic plant materials would need to have some protection to limit initial depredation in order to be applied to the lake under normal water level conditions. LDWF has provided the following estimated cost for the installation of four aquatic vegetation beds to be spaced in suitable sites, such as one on each end of the lake and one at mid-lake on each side would have a cost per bed of $2,500, or a total cost of $10,000. Additionally, involvement of private riparian land owners should be encouraged to increase shoreline vegetation in suitable areas.

Figure 7: Example of an artificial reef structure.

3.2.4 Lake Level Management

As previously discussed in Section 2.1 of this report, the 6-foot lake drawdown proposed by LDWF in 2010 did not proceed due to local concerns regarding lakeshore stability and the estimated cost for the USACE to study the potential impact. During the October 2011 meeting between various agencies and stakeholders, it was suggested that short-duration water level reduction by 1.5 or 3 feet during Fall and Winter months (i.e. mid-September through mid-January), all though not as effective as the previously proposed drawdown, would have some beneficial effects on the lake's water quality flats, by exposing and consolidating the sediments. Furthermore, this would allow the LDWF, the PCPJ and other local stakeholders to plant terrestrial vegetation (e.g. cypress) in the flats and give the vegetation the time needed to establish itself. In addition, this would and also allow some of the flats to be exposed, allowing for consolidation of the substrate and may be more acceptable to the public. The short-duration water level reduction is in-line with the natural variability within the historic hydrologic regime (Table 2 and Figure 8). Based upon recorded historical lake stage levels, in the recent past False River level has fallen as much as 2.3 feet below the maintained pool level of 16 ft. MSL. This value is comparable to the proposed 1.5 to 3-foot water level fluctuation discussed in this report for fall and winter months.

The lake level management is consistent with the LDWF Waterbody Management Plan (Appendices A and B). Plots of the distribution of high and low lake stage occurrences (Figures 9 and 10) show that high lake stages are more common during the months of February, March and April (Figure 9). In comparison, low lake stage month have historically occurred during the months of September, October, November and December (Figure 10). A more natural lake level management strategy would be beneficial to the lake's ecosystem, fisheries and provide for increased storage capacity at the onset of the high stage lake month.

Table 2: Characteristic of False River Stage

Parameter	Pre-1993 Value	Post-1993 Value
Mean Stage	17.9 ft. MSL	15.8 ft. MSL
Median Stage	17.7 ft. MSL	15.8 ft. MSL
Mode Stage	16.0 ft. MSL	16.0 ft. MSL
Standard Deviation	1.6 ft. MSL	0.68 ft. MSL
Minimum Stage	14.7 ft. MSL	14.6 ft. MSL
Maximum Stage	21.8 ft. MSL	19.0 ft. MSL
Range	7.1 ft.	4.4 ft.

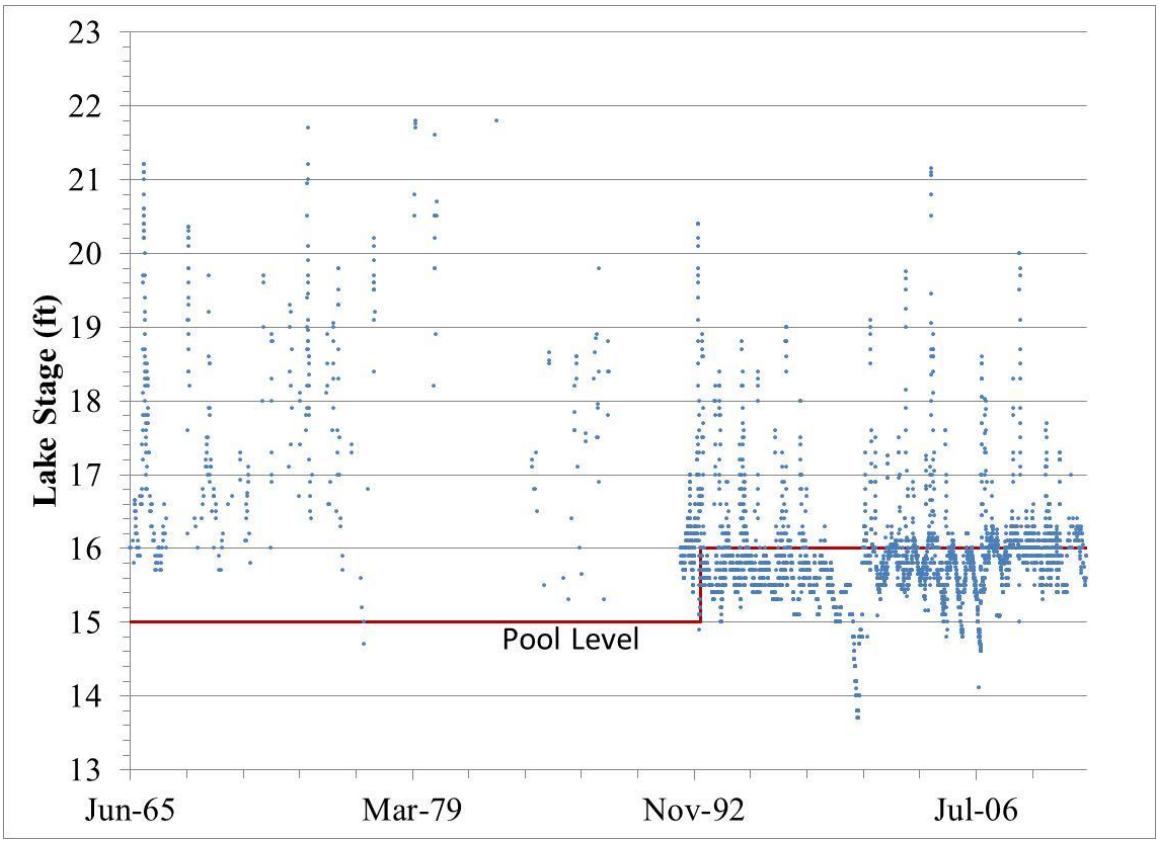


Figure 8: False River lake stage for the period 1965 - 2011.

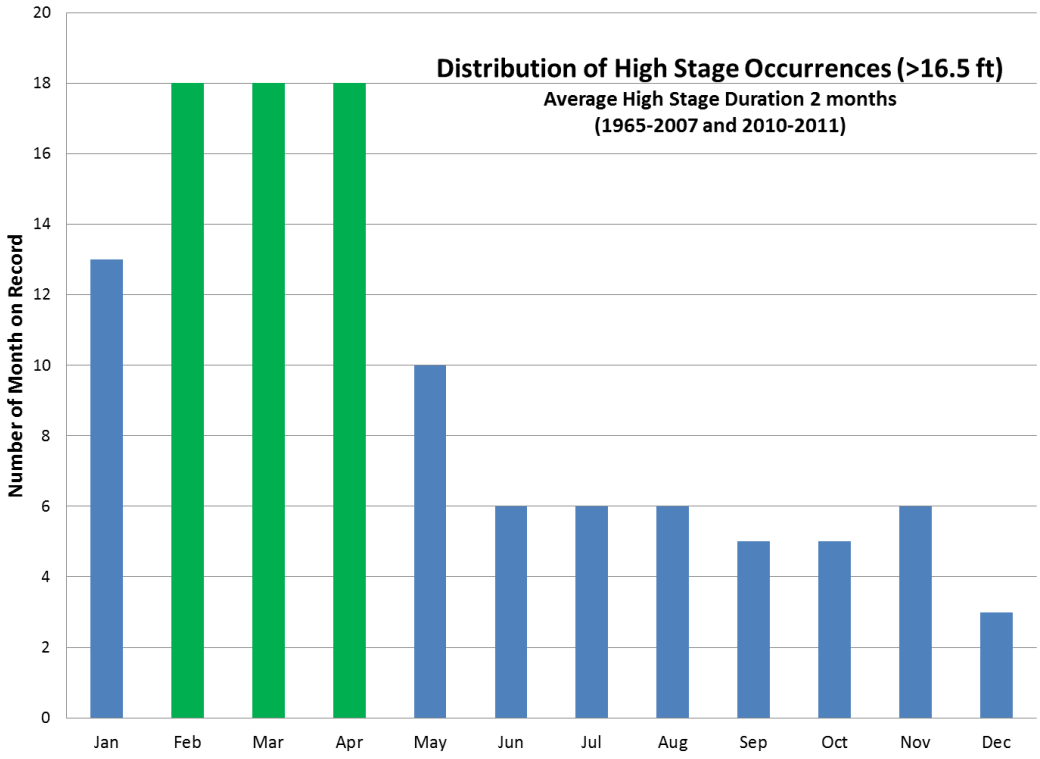


Figure 9: Historical distribution of high lake stages in False River.

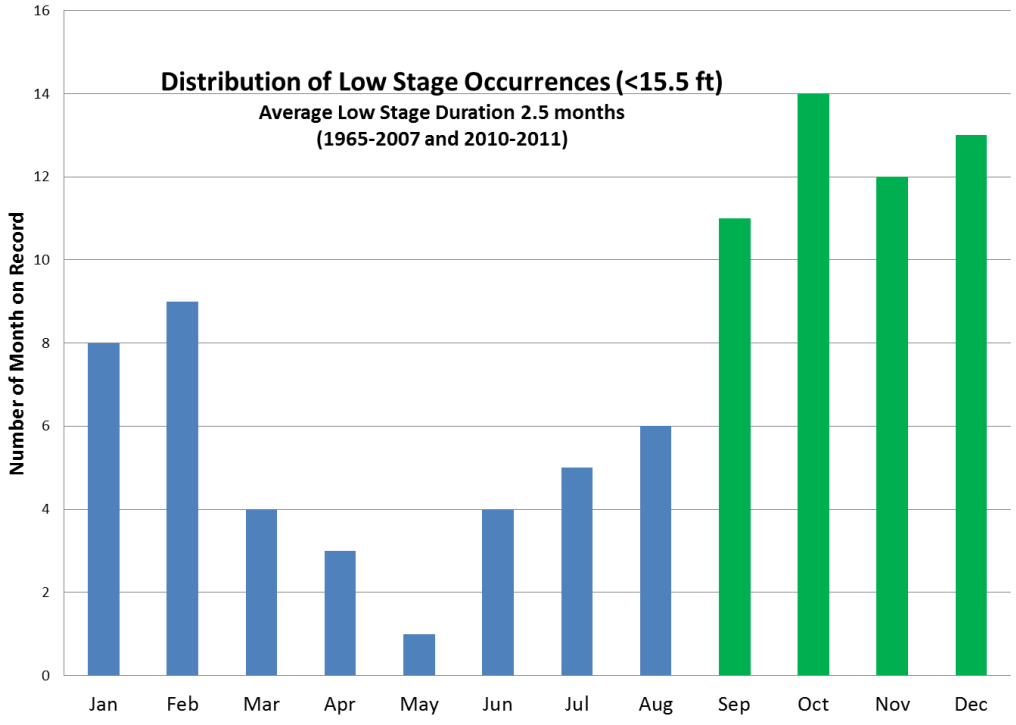


Figure 10: Historical distribution of low lake stages in False River.

3.2.5 Creation of Islands in the South Flats

During the October 2011 meeting held by various agencies and stakeholders, it was suggested that as an interim action, during the period between the USACE Feasibility Study being completed, submitted, reviewed, approved and funded, the construction of smaller islands should be considered in the shallower portion of the south flats (Figure 11). Some of the islands envisioned by the USACE's plan could be constructed by the PCPJ to further initiate this project and begin enhancing fish habitat in the lake. The success of this interim action would be enhanced if it was performed in coordination with short-term water level reduction. It is recommended that an agreement be entered into with the USACE so that the work performed could subsequently be used as cost share match for the USACE's longer term effort. However, the ability of the LDNR and/or PCPJ to enter in an agreement with the USACE under the Continuing Authorities Program (CAP) is limited by the ability of the USACE to fund the ongoing project.

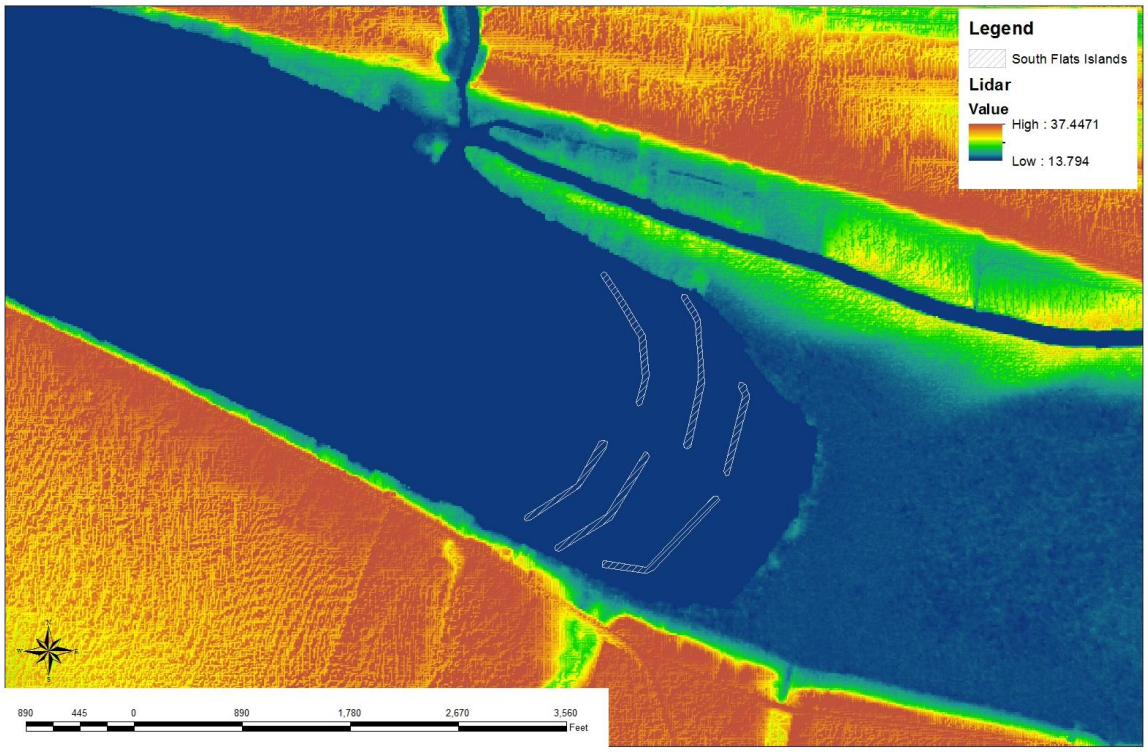


Figure 11: Preliminary USACE island design for the South Flats.

3.3 Fish Stocking

Since 1971, LDWF (and its precursor the Louisiana Wildlife and Fisheries Commission) indicated that False River's aquatic resources were being impacted by increased turbidity. In 1975, stocking was initiated and by 1998 game fish populations were in decline. In accordance with LDWF's Waterbody Management Plan Part VI-A – Lake History & Management Issues

(Appendix A), between 1984 and present, the lake was stocked 19 times with Florida largemouth Bass and/or striped bass and/or hybrid striped bass. False River was last stocked in the spring of 2011 with Florida Bass.

4 Potential Funding Mechanisms

A number of funding mechanisms are potentially available for short and long-term improvement of False River ecosystem using local, State, Federal or Non-Governmental Organizations (NGOs) sources. At various times in the past, all four sources have been used to protect and restore False River. Negotiations should be initiated with the USACE to determine if funds expended by state and local government could be used as match for the USACE Aquatic Ecosystem Restoration Project without unduly delaying interim action implementation. The following list does not include all possible sources of funding available, but is a selection of existing and commonly used sources for this type of projects.

4.1 Local Sources

The PCPJ has previously funded studies, cleaning of the sediment basin, fencing of portions of the channels, as well as other remedial activities on The Island and in False River. The Police Jury has indicated its willingness to allocate local funding for the implementation of smaller projects to restore False River, as well as to potentially use local funding as the match for the USACE False River Aquatic Ecosystem Restoration Project. Other potential source of local funding could include the City of New Roads, local organizations, as well as other stakeholders.

4.2 State Sources

A number of State programs exist that can be used to fund projects such as this one, including the following:

- Capital Outlay funding for acquiring lands, buildings, equipment or other properties or for their preservation or development or permanent improvement is made available on a yearly basis by the Louisiana Legislature.
- LDEQ administers the USEPA's Section 319 program in Louisiana.
- LDWF administers the U.S. Fish and Wildlife Service's (USFWS) Sport Fish Restoration Act program in Louisiana. LDWF funds fish stocking, aquatic vegetation planting, artificial structure and other aquatic habitat improvements using this program.

4.3 Federal Sources

A number of Federal funding sources through several agencies are available for projects similar to the False River Aquatic Resources Ecosystem Restoration Project. Three of those are the USACE Section 206 Program, the U.S. Environmental Protection Agency (USEPA) Section 319 Program and the NRCS Environmental Quality Incentive Program (EQIP).

4.3.1 U.S. Army Corps of Engineers

Under the Section 206 of the Water Resources Development Act of 1996, the USACE has been collecting information and conducting planning on the False River Aquatic Ecosystem Restoration Project. The project requires a 35% match by, or from local/state sponsors and has a Federal cap of $5,000,000 (see Section 2.1).

4.3.2 U.S. Environmental Protection Agency

Under Section 319 of the Clean Water Act, funding can be obtained to mitigate non-point source pollution. This funding source can be used to implement hydromodification projects which, in this case, would result, in a decrease of sediment pollution (e.g. siltation and turbidity) from the M-1 Canal to False River. The project requires a 40% match by, or from local/state sponsors. The Section 319 Program in Louisiana is handled through the LDEQ.

4.3.3 Natural Resources Conservation Service

The NRCS has funds available through the Louisiana Environmental Quality Incentives Program (EQIP). EQIP is "a voluntary USDA conservation program for farmers and ranchers to treat identified soil, water, and related natural resource concerns on eligible land. It provides technical and financial assistance to eligible agricultural producers." EQIP was used to fund the fencing and bank work that has been performed along the main channel of the M-1 Canal. In addition, the NRCS also has the Wetland Reserve Program (WRP), the Wildlife Habitat Incentive Program (WHIP), the Grassland Reserve Program (GRP) and the Conservation Stewardship Program (CSP).

4.3.4 U.S. Fish and Wildlife Service

The USFWS has funds available through the Sport Fish Restoration Act (a.k.a. Dingell-Johnson Act or Wallop-Breaux Act). It provides funding to the States for management and restoration of fisheries, aquatic education, wetlands restoration, as well as others. The current stocking of False River is funded under this program. USFWS also has limited funding available through its Partners for Fish and Wildlife Program for smaller-scale habitat restoration projects that benefit fish and wildlife habitats.

4.4 Non-Governmental Organizations and Other Donors

In addition, several NGOs and other donors have programs tailored to address ecological and environmental issues; below are a few that may be explored to assist with this ecosystem restoration effort:

- Ducks Unlimited: the Mississippi Alluvial valley is a top priority of the organization, which seeks to restore wetlands for waterfowl habitat.
- The Nature Conservancy, including the Louisiana Nature Conservancy, has initiatives for reforestation and floodplain reconnection projects, as well as projects to improve freshwater stream habitats.
- Apache Corporation: tree grant program through the Apache Foundation provides for the purchase of seedlings to enhance wildlife habitat and shoreline planting.

Other NGOs and donors that may have resources to assist in addressing habitat restoration include angler's clubs such as the Louisiana Bass Anglers Sportsmen Society (B.A.S.S.) Federation.

5 Summary

House Concurrent Resolution 168 of the 2011 Regular Session of the Louisiana Legislature directed the LDNR, in conjunction with the PCPJ, to coordinate with other state agencies, local governmental agencies, and stakeholder groups in order to help expedite the efforts by the USACE to restore the False River ecosystem. The interim alternatives presented in this report can provide direct short- and long-term benefits toward the on-going restoration of the aquatic ecosystem of False River and will help to expedite the USACE efforts. The measures are complementary to the potential management measures identified by the USACE, and address the identified root cause of the deterioration of the lake's water quality, as well as provide improvement to the aquatic vegetation and fisheries.

Appendix A

LDWF Waterbody Management Plan Part VI-A

Lake History & Management Issues

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES DIVISION

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

FALSE RIVER

LAKE HISTORY & MANAGEMENT ISSUES

CHRONOLOGY

DOCUMENT SCHEDULED TO BE UPDATED ANNUALLY

December 2009 – prepared by
Rachel Walley, Biologist Manager, District 7

September 2011 – updated by
Rachel Walley, Biologist Manager, District 7

Contents

LAKE HISTORY

GENERAL INFORMATION

Date formed
An inactive oxbow of the Mississippi River formed by 1722.

Impoundment
Owners – State of Louisiana

Purposes for creation – Natural oxbow of the Mississippi River

Size
3,212 surface acres

Water shed
34,453 acres of mostly agricultural pasture-land in the interior of The Island and mixed woodlands and pasture-land northeast of New Roads. There are two main drainages in the watershed that flow into the lake. Patin Dyke on the north end drains 25% of the watershed, while Discharge Bayou on the south end drains the remaining 75%.

Pool stage
16' MSL (mean sea level)

Parish/s located
Pointe Coupee Parish (SEE APPENDIX I – POINTE COUPEE PARISH MAP).

Border waters
Mississippi River (separated from lake by main-line levees), Patin Dyke Slough Canal (also known as M-2), False Bayou, False River – Bayou Grosse Tete Drainage Canal (also known as "The Lighthouse Canal", "The Rougon Canal", or M-3), Discharge Bayou (also known as M-1), The Chenal, and Bayou Sere.

Drawdown description
Spillway – 3 – 8'x8'175' reinforced concrete conduits under the highway embankment.
Bottom invert elevation of the conduits is 9.5' MSL.
Gate size – 3 roller gates at the end of (3) 8'x8' concrete conduits.
Number of gates – 3
Condition – Good
Maximum drawdown potential – 10'MSL

Note: A dominant factor affecting the lake's drainage potential during flood periods is the water level in Bayou Grosse Tete. Not only do the bayou stages reach elevation above 17

feet, it has the ability to peak quicker than the lake. This can result in reverse flow in the Lighthouse Canal.

Who controls
Pointe Coupee Police Jury

LAKE AUTHORITY

Association
The Lake and Watershed Committee of the Pointe Coupee Parish Police Jury is no longer active.

ACCESS

Boat docks
6 boat ramps < http://lamarinas.losco.lsu.edu/ >

(SEE APPENDIX II – MAP AND LANDINGS)

RAMP NAME	COORDINATES	
Morrison's	30.69263	-91.43314
New Roads Public Launch	30.69234	-91.43522
Point Breeze	30.68315	-91.45945
LA Express	30.61714	-91.43437
Jim's Landing	30.68955	-91.41509
Beuches Boat Landing	30.62178	-91.45795

Piers
Piers available for fishing are at Morrison's Landing and the New Roads Public Launch.

State/Federal facilities
NONE

Reefs
An unknown number of artificial reef structures have been placed by individual fisherman. These include sunken Christmas trees, willow trees, tires and riprap. Most are unmarked.

SHORELINE DEVELOPMENT

State/National Parks
NONE

Shoreline development by landowners
Most of the lake's shoreline (90%-95%) is developed with permanent residences, seasonal residences (camps), bulkheads consisting of either wooden or vinyl (sheet-pile) materials,

and piers. Exceptions include:

1. the large tract of wooded bottomland adjacent to the south flats of lake
2. an isolated wooded parcel along the north flats near the Cypress Cove Development in Ventress

The largest section of riparian shoreline is about ½ to ¾ of a mile long and exists between Parlange Plantation and the Mix area. Shorter lengths of isolated riparian shoreline are also found in the Oscar area where isolated 100 ft to 600 ft lengths of riparian habitat is along shoreline. The riparian shoreline consists of mainly mixed hardwood and cypress.

PHYSICAL DESCRIPTION OF WATER BODY

Shoreline length
22 miles

Timber type
Bottomland hardwoods occur west of the southern flats region and in isolated locations along the shoreline.

Average depth
21 feet

Maximum depth
65 feet

Natural seasonal water fluctuation
A study by Coastal Environments, Inc. exists that describes seasonal water level fluctuations before construction of False River - Bayou Grosse Tete Drainage Canal in 1947. This study also includes a discussion of the water level fluctuations in False River after the construction of the False River - Bayou Grosse Tete Drainage Canal. The details of this study are not currently available since the study was contracted by the Attorney General's office to serve as expert testimony in court proceedings.

EVENTS / PROBLEMS

A. 1600's to ~1722 – False River oxbow lake forms when long Mississippi River meander loop is naturally cut-off from main flow of River by 1722.

B. ~1722 to 1947 – Bayou Sere serves as primary natural outlet for False River other than connections to Mississippi River (False Bayou and The Chenal). Connections are separated completely from Mississippi River by construction of mainline levees by USACE no later than 1930.

C. 1947 – Low water sill (top elevation of MSL – 15') with box culverts and concrete wing-walls installed adjacent to LA Hwy. 1 ("False River Road") at the northern end of the False River - Bayou Grosse Tete Drainage Canal ("Lighthouse Canal"). The Lighthouse Canal was constructed between 1947 and 1948.

D. 1964 to 1975 – Period in which the U.S. Soil Conservation Service (now the Natural Resource Conservation Service) developed the Bayou Grosse Tete Watershed Project with the Pointe Coupee Parish Police Jury and the Upper Delta Soil and Water Conservation District. The purpose of the project was to prevent flooding, improve drainage in the watershed, and improve farming conditions. The proposed project would result in 115 miles of channel work in the 137,000 acre watershed. The installation would take approximately six years to complete at a cost of $7,351,700. In the proposed project, Channels M-1 and M-2 are scheduled for 5.15 and 3.33 miles, respectively, of excavation. The result would be a total of 532,110 cubic yards of dredged material. Runoff from these channels flow directly into False River (SEE APPENDIX III – MAP OF PROJECT AREA). Excavation of the M-1 and M-2 canals resulted in an increase load of suspended sediments into the lake. There is a projected 16.7 percent increase of sediments delivered into the lake if constructed for a total of 28,000 tons/year. Concerns for the fisheries resources of the lake became apparent to the Louisiana Wildlife and Fisheries Commission (LWFC) and the U.S. Fish and Wildlife Service (USFWS).

Note: the completion of this project resulted in approximately 28,000 cubic yards of silt/year deposited over 1,239 acres of lake bottom.

a. In 1968, under provisions of Public Law 566, authorization was granted to the SCS to provide planning assistance on the Bayou Grosse Tete Watershed Project.

b. 1970 – Following a field reconnaissance of the project area by USFWS and LWFC, a report from the USFWS, the Bureau of Sport Fisheries and Wildlife proposed that the fish and wildlife resources in the watershed were of low value. Although there was basic agreement with the report, LWFC did not concur with the opinion with respect to fish and wildlife resources. LWFC asked that another report be submitted, giving the resources more consideration. A follow-up report indicated that the while the wildlife resources in the watershed were abundant, fishery resources (other than in False River proper) were again of relatively low value. LWFC concurred with the new report, but expressed concerns that the project would hasten land clearing in the watershed. A recommendation (SEE APPENDIX IV – JUNE 9, 1970 LETTER) from LWFC was then made to construct sediment traps on all tributaries of False River since the lake was already experiencing siltation problems caused by the project.

c. 1971 – The Chairman of the District Board of Supervisors, Upper Delta Soil and Water Conservation District claimed that the LWFC Fish Evaluation Report's estimated loss of $36,824 in fisheries resources due to increased turbidity from the watershed project was inaccurate. He further stated that the turbidity problem would be temporary because luxuriant growth of vegetation on the newly exposed soil would slow sedimentation rates into the lake. He also claimed that the project's additional land treatment measures would reduce silting from their current levels. The Pointe Coupee Police Jury adopted a resolution sponsoring the Bayou Grosse Tete Watershed Project. The Police Jury further found that the LWFC's Evaluation Report was incorrect, and if the report is allowed to stand it could have affected project approval.

d. 1975 – Pointe Coupee Parish Police Jury held a public meeting to discuss the Bayou Grosse Tete Watershed Project. The police jury presented a project information sheet (SEE APPENDIX V – PROJECT INFORMATION SHEET) outlining the boundaries of the watershed, concerns, goals, and alternative considerations.

The director of the LWFC, in a July 10, 1975 letter (SEE APPENDIX VI – JULY 10, 1975 LETTER) expressed the department's concerns to SCS associated with an unsigned, undated draft of an EIS. He stated that the projected increase in sediments entering False River from sheet erosion was particularly disturbing. He also assumed that the project would result in future conversion of woodlands and pastures to row crop agriculture that would further adversely affect False River. He also suggested that further attention was needed to reduce the current erosion problems in the project area. He stated that this could be accomplished by the development and implementation of land use zoning regulations. Another unsigned draft EIS dated August, 1975 was sent to and reviewed by the director of the LWFC. His response to the SCS in an October 19, 1975 letter expressed further concerns. In the letter, he reported that False River has a valuable fishery, both commercial and recreational, and that any significant reduction of water quality would be harmful to said fishery as well as property values and related businesses. The letter also stated concerns that the SCS did not act upon the land zoning suggestion proposed in the July 10th letter in the new EIS. The director again laments his concerns in a January 30, 1976 letter to the SCS that the degrading the water quality of False River would have negative impacts on the fishery.

The unsigned, undated draft of the EIS was also sent to the USFWS for review. The Service's response came in an October 22 letter addressed to the SCS (SEE APPENDIX VII – OCTOBER 22, 1975 LETTER). The letter expressed concern that the increased sediment that was predicted to enter False River would have an adverse effect on the lake's fishery. The letter also expressed concern that individual landowners have up to 10 years after completion of the project to install land treatment measures. These measures would decrease the sediment yields resulting from sheet erosion. There was concern that in the time allowed for landowners to install the treatment measures, their absence could subject the lake to extremely high levels of suspended sediments, nutrients, and agricultural chemicals. There was also concern that the installation of land treatment measures were at the discretion of the individual landowner. The USFWS also stated that they realized that the intent of the project was to improve watershed drainage for agricultural purposes. However, they felt that the resources of False River must be protected and that improvement of the water quality entering the lake should be an important goal of the project.

E. 1975 – Hybrid striped bass stocking initiated.

F. 1976 – The Bayou Grosse Tete Watershed Work Plan is approved by Congress.

In a November 2nd letter to the LWFC, the Pointe Coupee Parish Police Jury requested a "letter of approval or no objection" on the watershed plan. The LWFC responded in a November 16th letter stating that there were certain project features that can severely

damage the fisheries resources of False River. It also stated that the land treatment measures were a vital component of this project, yet there was no guarantee that they would ever be installed. Also mentioned was the economic value of False River to the Parish and to the city of New Roads. A substantial investment in the lake by LWFC was cited with regard to a fish stocking program, aquatic weed control, and fisheries related research.

November 24th: USFWS sent a letter to the USACE focusing on the potential damage from suspended sediments and possible pesticide contamination in fish flesh resulting from the watershed project. The USFWS requested that the USACE hold the Pointe Coupee Parish permit application for the watershed project in abeyance until they had the opportunity to provide comment on adequate pesticide sampling data.

December 14th - Pointe Coupee Police Jury held a public meeting where it was determined that sufficient planning had been done. They also agreed that the people of the area were knowledgeable of the project and confident of its intended benefits. The Police Jury then passes a resolution requesting that a permit be issued as soon as possible.

G. 1977 – USFWS's request for brief sampling program of pesticide residues was rejected by the Pointe Coupee Police Jury. The USACE responds to the service's request for pesticide data in a May 10th letter stating that there was not the manpower to obtain this information. The USACE further details that they depend upon the EPA and the Louisiana Stream Control Commission to review water quality aspects of projects. They also state that the EPA had reviewed the EIS and commented that sufficient information had been provided and that they had no objection to the proposed action. The USFWS in a March 4th letter to the EPA states that they don't oppose the project per se, that they are only concerned with the lack of proposed adequate safeguards. They also expressed their concern of the pesticide residues in the lake.

   May 18th – Due to the objection of the USFWS for the issuance of a permit to work in the M-1 and M-2 channels, the Pointe Coupee Parish Police Jury amend their permit application to exclude any work that would be associated with those channels. The USACE issues a permit for the amended application.

H. 1980 – The Pointe Coupee Parish Police Jury re-applied to have the previously deleted channels permitted. They agree to install sediment traps in the channel. USACE grants the permit. The USFWS maintains its position on the project.

I. 1983 – Three month long flooding on False River associated with heavy rains and high stages of Mississippi River (subsurface hydrologic connection exists between river and the oxbow lake due to Mississippi River Alluvial Aquifer). The highest level of water recorded at 23.2 feet (MSL).

   Construction and implementation of SCS (now the NRCS) Bayou Grosse Tete Watershed Project completed. This project was formally initiated in 1968, including the de-snagging and deepening of existing parish canals as well as construction of several new canals. G-7 project drains an additional 30,000 acres into False River.

J. 1984 – Florida bass stockings initiated.

K. 1985 – State of Louisiana is recognized as owner of bottom of lake below a contour elevation of 15'MSL.

LOUISIANA REVISED STATUTES: RS 9:1110
§1110. Ownership of land adjacent to False River
The title of the owners of land adjacent to that body of water in Pointe Coupee Parish known as False River shall extend to fifteen feet above mean sea level. The boundary line formed at fifteen feet above mean sea level marks the division between land owned by the state and land owned by private persons along the banks of False River.
Added by Acts 1975, No. 285, §1.

L. 1988-1999 – Bayou Grosse Tete Watershed Project #6 completed (SEE APPENDIX VIII – BGT PROJECT MAP**)**

M. 1989 – Louisiana Supreme Court rules that False River - Bayou Grosse Tete Drainage Canal ("Lighthouse Canal") is a private non-navigable waterway.

N. 1990 – Pointe Coupee Parish Police Jury initiates a project at the Lighthouse Canal to change the old sill structure. False River - Bayou Grosse Tete Drainage Canal low-sill weir structure is replaced with a sluice gate at each of the box culvert inlets (top of gates elevation MSL - 16') with pulleys for operation of gates

O. 1991 April 1 – Largemouth bass management plan takes effect, slot limit of 15 to 19 inches, daily limit of 8 fish of which no more than two may exceed 19 inches.

September 20 - LDWF bans the use of gillnets, trammel nets and fish seines.

Aquatic vegetation coverage begins decline in the north end of the False River.

P. 1991-1992 – Bayou Grosse Tete Watershed Project #7 completed (SEE APPENDIX VIII – BGT PROJECT MAP)

Q. 1992 – Hurricane Andrew makes landfall in Louisiana. Although there are no reports of fish kills in False River, it is observed that the lake is churned by strong winds. It is assumed that the disturbance of the lake bottom contribute to the decline in vegetation.

R. 1993 – January flood waters raised the lake level to 20.4 feet during an open gate period.

S. 1993 – Bayou Grosse Tete Watershed Project #8 completed (SEE APPENDIX VIII – BGT PROJECT MAP**)**

T. 1994 – Pointe Coupee Parish Police Jury lower water level to 15 feet due to previous years of flooding. After charges and counter charges by the public a compromised was reached and the level is now maintained at 15.5 feet in the winter, spring and fall and at 16 feet during the summer for recreational purposes.

April 12 – Police Jury Resolution setting lake level unanimously carried as follows: "RESOLVED, That the water level of False River be set at 16 feet; and be it "RESOLVED further, That beginning June 1, 1994 the water level be set at 15.5 feet."

U. 1997 – The least amount of vegetation is recorded in 14 years.

V. 1997 - 1998 – Pointe Coupee Parish Police Jury project in False River - Bayou Grosse Tete Drainage Canal places rip-rap in scour-hole immediately downstream of concrete wing-walls and along banks of canal for a distance of approximately 350 ft. downstream from the south side of LA Hwy. 1 a distance of approximately 350 ft. for bank stabilization. The project also consisted of de-snagging the entire length of the canal from False River to Bayou Grosse Tete.

W. 1998- LDWF fish sampling results indicate that the largemouth bass population is in decline. In March the department alters the lake classification from a trophy lake to a lake of special concern. Associated fishing regulations require that largemouth bass must be 14 inches or greater with a daily creel limit of five.

Pointe Coupee Parish Police Jury pass a resolution on behalf of the False River Lake Committee requesting assistance of state and federal agencies to conduct a survey to assess the damages of the siltation in the lake.

An overlooked sediment trap on the south end that was constructed during the Bayou Grosse Tete Watershed project was cleaned out. There is an increase of aquatic plant coverage following the cleaning of the trap.

X. 1999 – House of Representatives pass Concurrent Resolution NO. 275 requesting DNR and LDWF to jointly study and make recommendations relative to drainage and sedimentation of False River. The resolution states that since the completion of the Bayou Grosse Tete Watershed Project, vast plumes of sedimentary deposits have been observed on the north and south ends of the lake. The dramatic increase of sediment had led to a loss of habitat for both the lake's flora and fauna.

Risers added to tops of sluice gates at False River - Bayou Grosse Tete Drainage Canal control structure by Pointe Coupee Parish Police Jury due to severe drought conditions (top of gates with risers elevation MSL - 16'). Police Jury has indicated that DOTD approval was given for addition of risers at the time of their installation.

Y. 2000 – False River Aquatic Vegetation Restoration Project was conducted by the Lewisville Aquatic Ecosystem Research Facility (LAERF). This project was funded by the parish in response to the near disappearance of aquatic vegetation. The project was to assess the potential establishment of four native aquatic plant species in the lake. The results showed that vegetation has a high potential for establishment in areas not significantly impacted by the influx of silt. It was also noted that plants that are protected from grazing had a higher success rate.

Drought conditions lower the lake level to 13.8' MSL.

Z. 2001 – Allocation of ten thousand dollars initiates USACE Aquatic Ecosystem Restoration Plan.

AA. 2002 – Hydrilla is no longer present in the lake.

USACE secures first phase of funding for an Aquatic Ecosystem Restoration Project feasibility study. The project was authorized by Section 206, Water Resources Development Act of 1996. The project sponsors are Pointe Coupee Parish Police Jury

and DNR. The proposed action is to enhance and restore the ecosystem of the lake by enhancing fisheries and wildlife habitat, and to address sedimentation and water quality issues.

BB. 2004 May and June – Flooding on False River due to heavy rainfall both in lake watershed and in downstream areas over relatively short period of time (approximately 28 inches in 9 days). In response to the flooding, the False River Civic Association, a non-profit organization, was created.

CC. 2005 – NRCS completes project in the M-1 canal near the south end of the lake. Contractors performed dewatering projects to move cattle channel banks by installing fencing and water troughs. They also re-sloped and stabilized banks and installed drop pipes. There is one remaining stretch of the M-1 cannel that is in need of fencing and bank stabilization.

DD. 2006 – South end sediment trap was again cleaned out. An estimated 1,200 yards were removed, approximately half of the amount removed in 1998. It is believed that the amount of sedimentation has decreased.

DNR funds an initial reconnaissance investigation (Phase I of a six-phase planning process as developed by USACE) to identify water resource problems associated with the Upper Terrebonne Basin (UTB) Water Quality Improvement Project. UTB is a tri-parish partnership, along with LDEQ, U.S. EP. UTB, along with non-governmental stake holders, plan to address siltation, fisheries, water quality and flooding issues in False River. (http://www.utbwatershed.com/index.html)

EE. 2007 May 8 – Passage of resolution by Pointe Coupee Parish Police Jury clarifying that that goal of lake level management will be a pool stage of MSL – 16' for the entire year.

FF. 2009 – USACE receives second phase of funding for the Aquatic Ecosystem Restoration Project feasibility study

GG. 2010 – LDWF proposes a fall/winter drawdown to improve lake conditions for fisheries. Drawdown is postponed until USACE completes feasibility study. More funding has been secured to complete the study, but the study continues to be delayed due to lack of funding. LDWF maintains their position that a drawdown would be beneficial for the lake's fisheries, but agrees that the issues in the watershed must be addressed first.

NRCS completes project in the Patin Dyke canal on the north end of the lake. Construction is similar to that of the M-1 project of 2005.

HH. 2011 – House of Representatives pass Concurrent Resolution NO. 168 to urge and request that the DNR, in conjunction with the Pointe Coupee Parish Police Jury assume the role of lead local project sponsor for the USACE Aquatic Ecosystem Restoration Project.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Historically

Prior to the 1940's submerged aquatic vegetation in False River was controlled through extensive water fluctuations associated with the Mississippi River. However, construction of the Lighthouse Canal and low water sill in 1947 stabilized the water level and resulted in ideal growth conditions for submerged aquatic plants. The earliest catalog of species on the lake dates back to 1966. The major species of aquatic plants listed in order of density were as follows:

Coontail, *Ceratophyllum demersum*
Milfoil, *Myriophyllum spp.*
Pond weeds, *Potamogeton spp.*
Water stargrass, *Heteranthera dubia*
Southern naiad, *Najas guadalupensis*

There was a shift in the aquatic plant community structure of the lake in the early 1970's. In 1971, there was a total of 870 vegetated acres in the lake (north end – 440 acres; south end – 280 acres; east and west fringe – 150 acres). The north end was primarily water milfoil (85%) and the south end was primarily coontail (90%). By 1977, water milfoil had replaced coontail as the dominant species on the south end. Throughout the 1980's, the aquatic plant community remained similar on the north and south ends of the lake. A complete absence of aquatic vegetation on the north was observed by 1990. Due to the reduction of vegetation on the north end of the lake, the public began requesting that LDWF transplant native vegetation from the south end to the north end of the lake. This request was not filled due to monetary constraints. LDWF stated that the primary reason for the disappearance of aquatic vegetation is sedimentation and turbidity issues following flooding events. The department also speculated that the unauthorized introduction of grass carp to the lake could be contributing to the decline in aquatic vegetation. Hydrilla (*Hydrilla verticillata*) was documented for the first time on the lake in 1993 near the south end. By 1994, dense stands of hydrilla were obstructing boating access to many camps on the southern end of the lake. To date there is no hydrilla present in the lake. There was a 40 acre stand of lotus on the south flats that disappeared after 2009.

A survey of the lake in 2011 found that there is a 15 acre stand of southern naiad located in the south flats. This marks the first evidence of submerged aquatic vegetation, besides lotus, in the lake since 2001. The establishment of southern naiad is evidence that lake conditions are now more conducive to vegetation establishment. These improvements are since the work in the M-1 canal in 2005, and the 2010 work done in the Patin Dyke canal on the north end of the lake.

Currently
There is less than 5% coverage of aquatic vegetation on the lake.

Type map
Type mapping has been conducted from 1983 through 2004 and 2011 with the exception of 1989. (SEE APPENDIX IX – TYPEMAPS)

Biomass
No biomass sampling has been conducted.

Treatment History by Year
Biological
NONE

Chemical
Hydrilla:
- 1993 – 16 acres
- 1994 – 10 acres
- 1995 – 18 acres

Water hyacinth:
- 1991 – 33 acres
- 1992 – 16 acres
- 1993 – 2 acres
- 1994 – 126 acres
- 1995 – 28 acres
- 1999 – 25 acres
- 2000 – 48 acres
- 2005 – 4.5 acres
- 2006 – 46 acres
- 2007 – 30 acres
- 2008 – 2 acres
- 2009 – 70 acres
- 2010 – 56 acres

Duckweed:
- 1991 – 5 acres
- 1993 – 4 acres
- 1994 – 2 acres
- 1999 – 7 acres
- 2005 – 39.5 acres
- 2006 – 70.5 acres
- 2007 – 47 acres

2008 – 37 acres
2009 – 109 acres
2010 – 75.6 acres

American lotus:
1992 – 23.5 acres
1993 – 2 acres
1994 – 7 acres
1995 – 15 acres
1996 – 27 acres
1999 – 42 acres
2000 – 6 acres
2001 – 37.25 acres
2006 – 30 acres
2007 – 39 acres
2008 – 20 acres

Mixed submergents (coontail/naiad/milfoil):
1983 – 52.5 acres
1990 – 17.5
2000 – 60 acres

Common salvinia:
1994 – 2.5 acres
2009 – 11 acres

HISTORY OF REGULATIONS

Recreational
Statewide recreational fishing regulations in effect with the exception of largemouth bass regulations.

April 1, 1991 - Largemouth bass management plan requires a slot limit of 15 to 19 inches; daily limit is 8 of which only two may exceed 19 inches.

March 1998 - Trophy status of largemouth bass removed, largemouth bass must be 14 inches or greater, daily limit is five.

Commercial
See statewide species and gear specific regulations.
September 20, 1991 - The use of gill nets, trammel nets and fish seines prohibited. (SEE BELOW)

TITLE 76
WILDLIFE AND FISHERIES
PART VII. FISH AND OTHER AQUATIC LIFE

Chapter 1. Freshwater Sports and Commercial Fishing

157. Netting Prohibition - False River Lake and Lake Concordia
The Louisiana Wildlife and Fisheries Commission hereby prohibits the use of gill nets, trammel nets and fish seines in False River Lake located in Pointe Coupee' Parish, and in Lake Concordia located in Concordia Parish, Louisiana. Said netting ban will become effective Friday, September 20, 1991.

AUTHORITY NOTE: Promulgated in accordance with R.S. 56:22(B).
HISTORICAL NOTE: Promulgated by the Department of Wildlife and Fisheries, Wildlife and Fisheries Commission, LR 17:894 (September 1991).

DRAWDOWN HISTORY

Drawdowns for control of submerged aquatic vegetation have not been conducted. Water levels are manipulated mostly for flood control. The control structure is operated by the Police Jury.

FISH KILLS / DISEASE HISTORY

No major fish kills have been documented in False River. Reports received of kill restricted to largemouth bass in the summer of 2000 (LMBV suspected, but not confirmed). Subsequent sampling confirmed LMBV in bass population. A kill in 2001 was restricted to common carp and was attributed to gill trematodes and bacterial infection.

CONTAMINANTS / POLLUTION

Water quality

Sampled Monthly by LDEQ from October 2001 to September 2002.

- Total suspended solids elevated at inflow points.
- Sufficient nitrogen compounds present as to not be limiting aquatic plant growth.
- Lake was experiencing organic enrichment, though not eutrophic.
- Fecal coliform bacteria samples were below standard of 200 – 400cfu/100ml.
- pH levels frequently elevated.
- Dissolved oxygen levels sufficient to support aquatic life, but fell sharply below a thermocline of 6-7 meters.

Sewage discharge has been eliminated for all but a small portion of the eastern shore. This area is being closely monitored and should be in compliance soon. Results from a water quality test of 10 sites on July 25, 2005 are available from the Lake and Watershed Committee.

BIOLOGICAL

Fish samples

Table below describes sampling since 1989 and scheduled sampling until 2014 This information is based on available data.

YEAR	GEAR
1968	Rotenone, 1 stations
1971	Rotenone, 4 stations
1976	Rotenone, 3 stations
1977	Rotenone, 3 stations
1980	Rotenone, 3 stations
1983	Rotenone, 3 stations
1987	Rotenone, 3 stations
1989	Electrofishing, 4 stations - Rotenone, 1 stations - Creel
1990	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 4 stations Creel
1991	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 4 stations
1992	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 4 stations Creel
1993	Electrofishing, 6 stations - Gillnet, 2 stations - Seine, 4 stations
1994	Electrofishing, 6 stations - Seine, 4 stations
1995	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 5 stations

1996	Electrofishing, 6 stations - Gillnet, 2 stations - Seine, 5 stations
1997	Electrofishing, 6 stations - Gillnet, 2 stations Rotenone, 3 stations
1998	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 5 stations
1999	Electrofishing, 6 stations - Gillnet, 3 stations
2000	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 5 stations
2001	Electrofishing, 6 stations - Seine, 5 stations - Rotenone, 3 stations
2002	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 5 stations
2003	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 5 stations
2004	Electrofishing, 6 stations - Gillnet, 3 stations
2005	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 5 stations Creel
2006	Electrofishing, 6 stations - Gillnet, 3 stations - Seine, 5 stations
2007	Electrofishing, 6 stations
2008	Electrofishing, 6 stations - Seine, 5 stations
2009	Electrofishing, 6 stations - Gillnet, 6 stations - Seine, 4 stations
2010	Electrofishing, 6 stations (LMB age and growth) - Seine, 4 stations - Creel
2011	Electrofishing, 8 stations (LMB age and growth) – Seine, 4 stations
2012	Electrofishing, 8 stations (LMB age and growth) – Gillnet, 6 stations - Seine, 4 stations
2013	Electrofishing, 8 stations – Seine, 4 stations
2014	Electrofishing, 8 stations – Seine, 4 stations

Lake Records

See LOWA state records http://www.rodnreel.com/LaFishRecords/ListFishRecords.asp

SPECIES	WEIGHT (lbs)	DATE	STATE RANK
Freshwater drum	25.08	April 2005	1
Freshwater drum	21.94	April 2007	3
Freshwater drum	19.83	February 2005	6
Freshwater drum	18.21	February 2005	7
Freshwater drum	18.16	February 2005	8
Freshwater drum	17.58	April 2004	9
Black crappie	1.50	February 2000	3
Hybrid striped bass	11.13	March 2005	9
Common carp	16.00	July 1976	6
Flathead catfish	33.13	May 2005	8

Stocking History

YEAR	FLORIDA LARGEMOUTH BASS		STRIPED BASS	HYBRID STRIPED BASS
	FINGERLINGS	PHASE II		
1984	150,000			
1989	32,000			
1990	301,193	1,733		
1991	211,000			
1997	125,145			
1999	33,506			32,253
2000	40,440		30,160	
2001	34,832		5,000	
2002	31,988			
2003	32,242			
2004	32,067			
2005	30,911			
2006				30,000
2007				32,310
2008	32,554			
2009				76,856
2010	2,520			
2011		600		

NOTE: only species of game fish have been stocked

Species profile

Family, Scientific and Common Names

Polyodontidae - paddlefishes

Polyodon spathula - paddlefish

Lepisosteidae - gars

Lepisosteus oculatus - spotted gar

Lepisosteus osseus - longnose gar

Lepisosteus spatula - alligator gar

Amiidae - bowfin

Amia calva - bowfin

Clupeidae - herrings

Dorosoma cepedianum - gizzard shad

Dorosoma petenense - threadfin shad

Cyprinidae - carps and minnows

Cyprinus carpio - common carp

Ctenopharyngodon idella – grass carp

Catostomidae - suckers

Ictiobus bubalus - smallmouth buffalo

Ictiobus cyprinellus - bigmouth buffalo
Ictaluridae - North American catfishes
Ictalurus furcatus - blue catfish
Ictalurus punctatus - channel catfish
Pylodictis olivaris - flathead catfish
Moronidae - temperate basses
Morone chrysops – white bass
Morone mississippiensis – yellow bass
Morone saxatilis - striped bass
Striped bass x white bass - hybrid striped bass
Centrarchidae - sunfishes
Lepomis cyanellus – green sunfish
Lepomis gulosus – warmouth
Lepomis humilis – orangespotted sunfish
Lepomis macrochirus – bluegill
Lepomis marginatus – dollar sunfish
Lepomis megalotis – longear sunfish
Lepomis microlophus - redear sunfish
Lepomis punctatus – spotted sunfish
Micropterus salmoides - largemouth bass
Micropterus punctulatus - spotted bass
Pomoxis annularis - white crappie
Pomoxis nigromaculatus - black crappie
Mugilidae – mullets
Mugil cephalus – striped mullet

Genetics

Genetic analysis was conducted on largemouth bass samples collected in False River during 1990, 1991, 1992, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2004, 2007, and 2008 electrofishing samples. Allozyme starch gel electrophoresis analyses were conducted at the Louisiana State University School of Renewable Natural Resources.

GENETICS					
Year	Number	Northern	Florida	Hybrid	Florida Influence
1990	15	100%	0%	0%	0%
1991	8	75%	0%	25%	25%
1992	39	61%	18%	21%	39%
1994	36	67%	25%	8%	33%
1995	39	62%	18%	20%	38%

1996	29	59%	7%	34%	41%
1997	39	52%	15%	33%	48%
1998	50	56%	16%	28%	44%
1999	30	73%	3%	24%	27%
2000	30	53%	13%	34%	47%
2001	28	68%	7%	25%	32%
2002	35	60%	6%	34%	40%
2004	30	60%	13%	27%	40%
2007	40	68%	10%	22%	32%
2008	71	59%	4%	37%	41%
2009	52	67%	4%	37%	41%
2010	139	64%	5%	31%	36%
2011	130	68%	9%	22%	31%

Threatened/endangered/exotic species

Exotic species - Grass Carp, *Ctenopharyngodon idella*.

- May 1989 – Grass carp weighing approximately 52 pounds is captured near the Lighthouse Canal.
- February 1991 – During routine gillnet sampling, a grass carp is netted in the south end of the lake. The fish escapes capture by tearing the net.
- December 2005 – During routine gillnet sampling, a grass carp is netted in the north end of the lake.
- January 2010 – During routine gillnet sampling, two grass carp are netted. One in the south end and one near the Lighthouse Canal.

Creel

Recreational angler survey – to determine a relative index of fishing pressure, catch, harvest success and species fished for.

Historic information

Years Conducted 1989, 1990, 1991, 1992, 2005, and 2010

Current methods

Dockside survey

HYROLOGICAL CHANGES

Water holding capacity has been changed throughout False River by the Mississippi River main stem levee and the installation of a low water sill in 1947. The low water sill was later replaced by sluice gates in 1990. In 1999, risers were added to the top of the sluice gates to further increase the holding capacity of the lake.

WATER USE

Hunting
YES

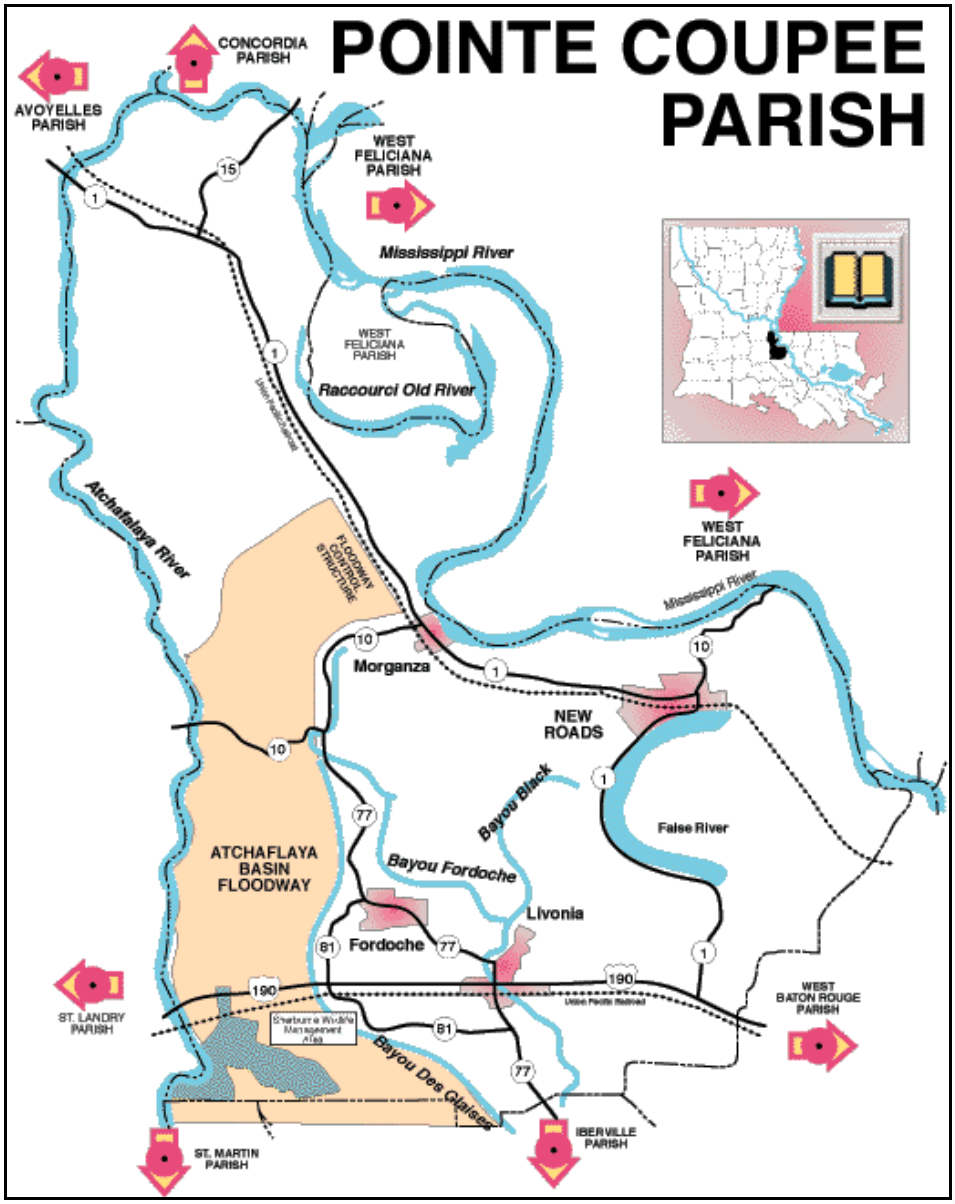
Skiing
YES

Swimming
YES

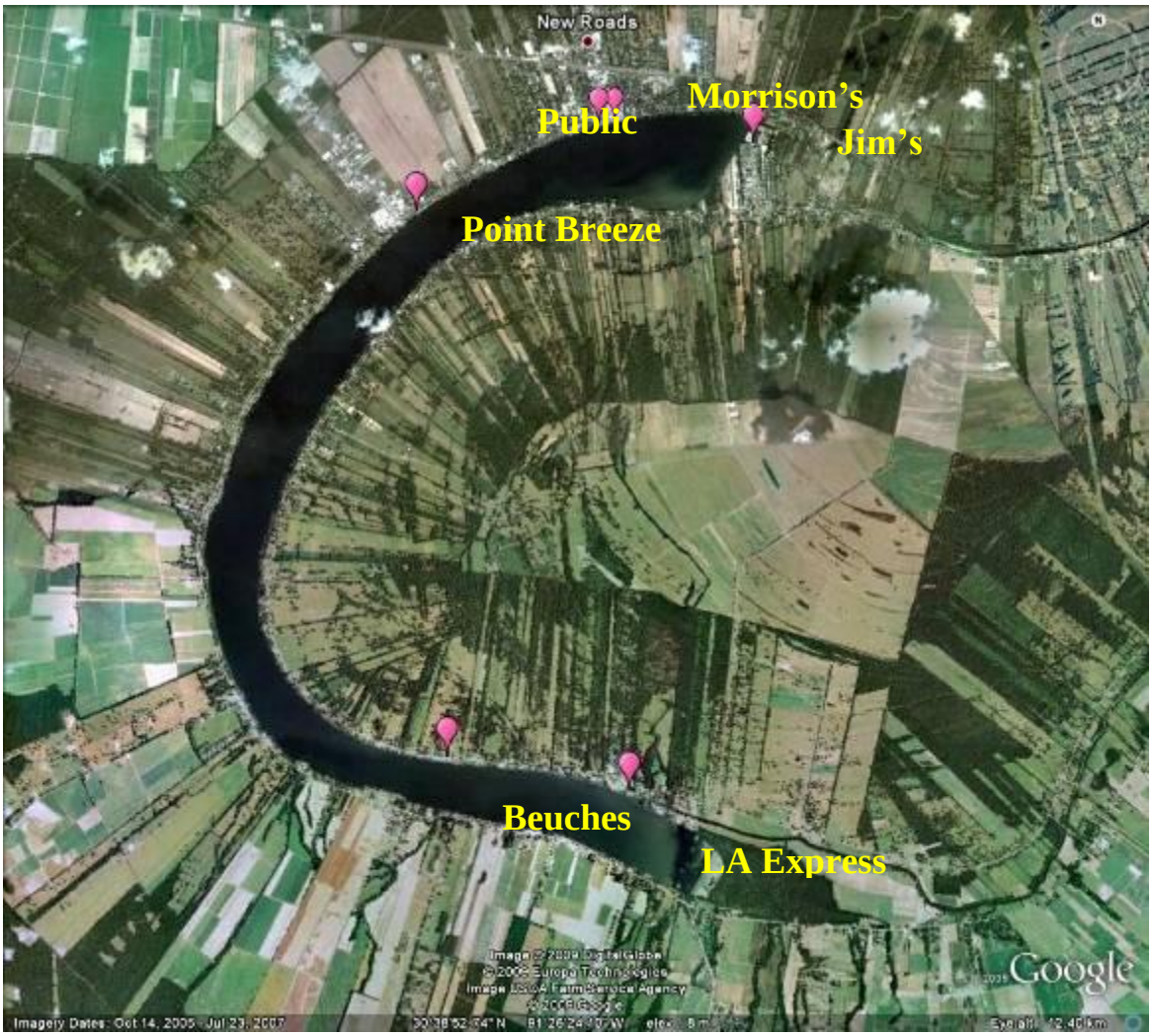
Fishing
YES

Boating
YES

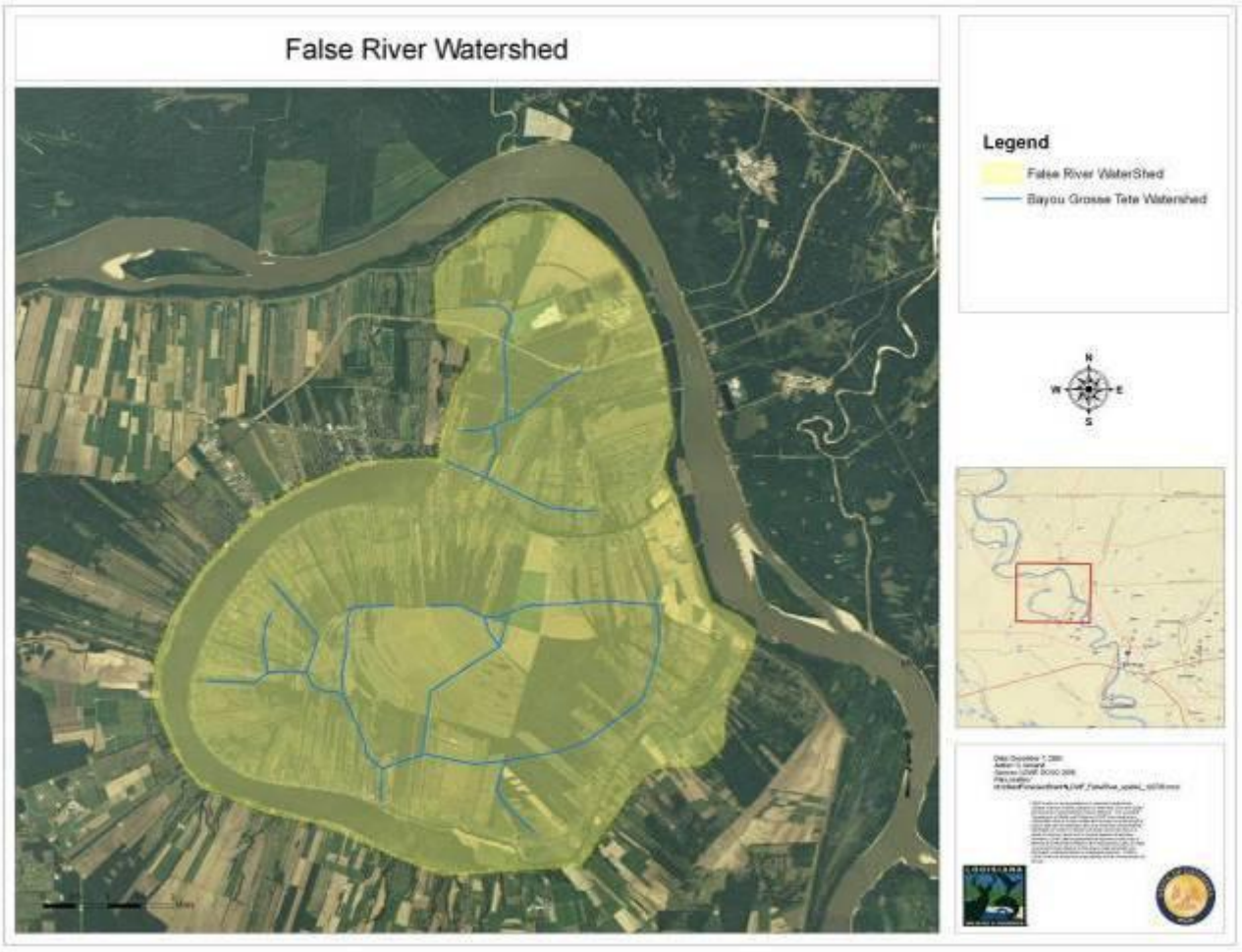
APPENDIX I – POINTE COUPEE PARISH MAP



APPENDIX II – MAP AND LANDINGS



APPENDIX III – MAP OF PROJECT AREA



NOTE: Shaded area encompasses the portion of the Bayou Grosse Tete Watershed Project that affects False River. This area is now the watershed for the lake. The canals that drain into the lake that were dredged during the project are outlined.

APPENDIX IV – JUNE 9, 1970 LETTER

June 9, 1970

Mr. Richard Eichhorn
Bureau of Sport Fisheries and Wildlife
315 Peeples-Newman Building
Vicksburg, Mississippi 39180

Dear Dick

With reference to my telephone conversation with Dean Fields June 8 concerning the Bayou Grosse Tete and Choctaw Bayou Watersheds, I am listing my suggested revision of paragraph 2 on page 1 of your draft report of the Bayou Grosse Tete Watershed.

> We have reviewed project maps and other data supplied by your staff. A field reconnaissance of the project area was conducted by members of your staff, a representative of the Louisiana Wild Life and Fisheries Commission and a member of our Vicksburg field office. Fishery resources other than those found in False River are of a relatively low value. Wildlife resources within the project area are of high value. Deer, squirrel and rabbit are abundant. Turkey and bear have been stocked on adjacent areas and have probably spread into this area. Information from your staff indicates that project channel work will not result in drainage of this area. Any additional land clearing resulting from better drainage will have detrimental effect on the present wildlife resources of the area.

I think a recommendation to construct sediment traps on all canals and ditches leading into False River Lake might be appropriate particularly since the lake is currently silting up at the entrances of these ditches and aquatic vegetation due to the shadow areas and increased fertilizer concentrations that are presently entering the lake. With new canals and reworked old canals the problem will certainly accelerate.

APPENDIX IV – JUNE 9, 1970 LETTER CONTINUED

I also suggest that the following change be made on the Choctaw Bayou Watershed report. Page 2, line 1 change "maintain" to "manipulate". According to my field notes, Paul McGowan agreed to build a control structure that would allow water level fluctuations of Lake Clause.

Sincerely yours

Gladney Davidson
River Basin Biologist

GD/pc

APPENDIX V – PROJECT INFORMATION SHEET

BAYOU GROSSE ' ATERSHED
Pointe Coupee Pa..sh, Louisiana

Project Information Sheet

This watershed is located in Pointe Coupee Parish, Louisiana. It is bounded on the north and east by the Mississippi River main line levee; on the south by Louisiana Highway 416 from the Mississippi River to the junction of Louisiana Highway 1, thence by Highway 1 to the vicinity of Oscar, thence by local drainage and Bayou Grosse Tete to the vicinity of Kenmore where it meets the levee forming the eastern limit of the Atchafalaya Basin floodway. The eastern limit of the Atchafalaya Basin forms the west boundary of the watershed.

The watershed is comprised of 137,000 acres. This includes 41,700 acres of cropland consisting of sugarcane, cotton, corn and rice; 30,800 acres of pastureland; 50,900 acres of forest land; and 13,600 acres of other uses including roads, channels, lakes, farmsteads, communities, and rural nonfarm residences. It has a flat topography throughout its area. False River is a significant feature of this watershed.

New Roads is the principal trade center in the watershed. Other towns include Morganza, Fordoche and Livonia. The population of the watershed is approximately 13,400 people of which about 71 percent are rural. Many economic conditions in Pointe Coupee Parish, which are representative of this watershed, are below the average for the State. About 30 percent are classed as poor. The 1970 median family income was $4,957. Between 1960 and 1970, the population in Pointe Coupee Parish declined by 486 persons. Many workers in this parish are unemployed and underemployed. Rising production costs of agriculture are continuing to reduce farm incomes particularly in smaller economic units. The number of small family farms also continue to decline.

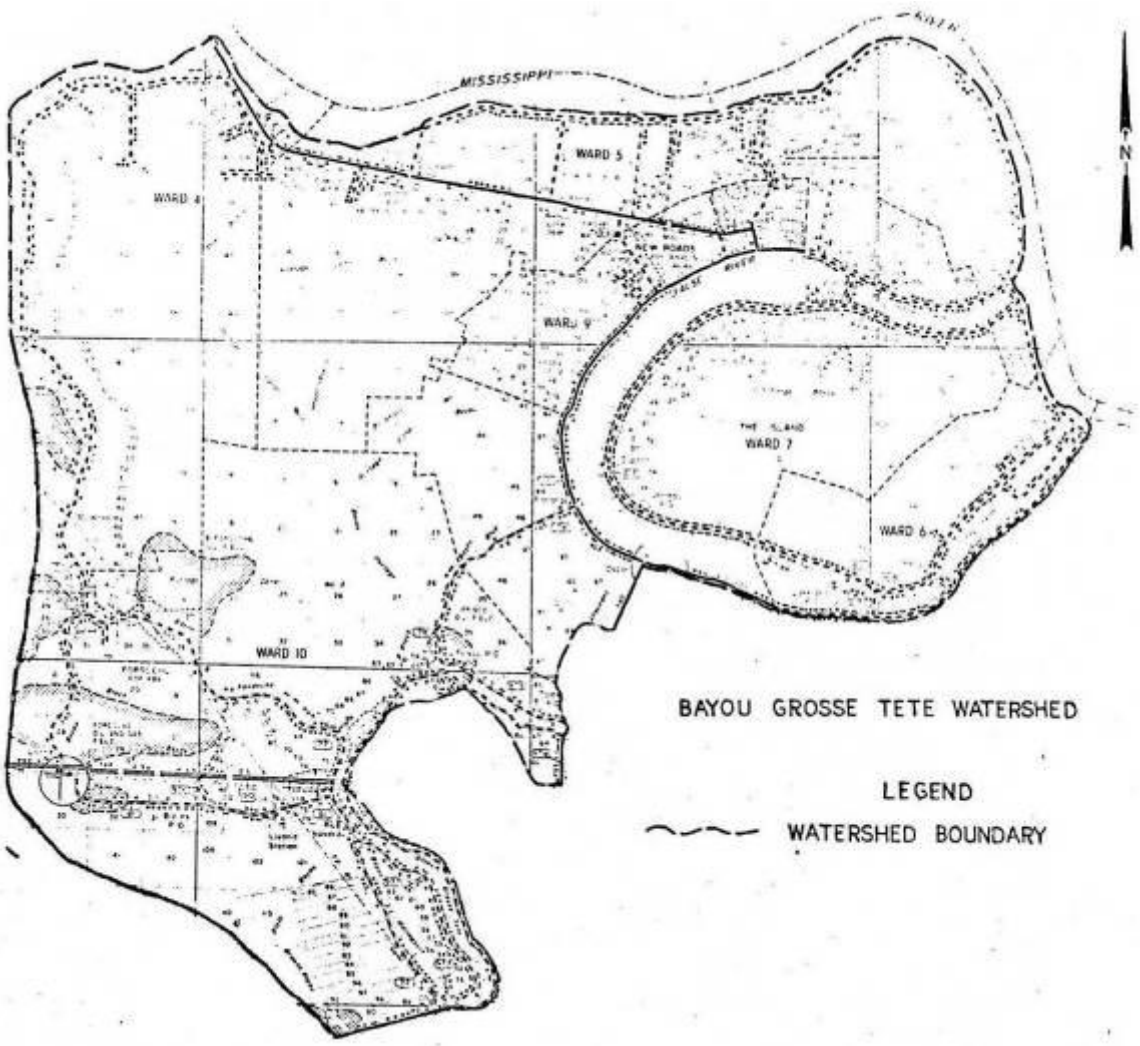
Water and related land resource problems in the watershed are flooding, inadequate agricultural drainage, erosion, and sediment. These problems are caused by inadequate drainage outlets during periods of high rainfall. Additional problems in water quality, fisheries, and wildlife are also associated with these adverse conditions.

Expressed concerns for this watershed:
1. Damages caused by flooding and sediment deposition
2. Limited yields attributed to inadequate drainage
3. Haphazard channel work with no overall comprehensive plan
4. Continuing limitations on farm income due to suppressed crop yields caused by flooding and inadequate drainage
5. A continuing deterioration of the local economy in general
6. A continuing decline in the quality and quantity of fish and wildlife resources.

Project goals are:
1. Improve farming conditions to increase farm family incomes and improve living conditions.
2. Reduce average soil loss to a minimum consistent with sound measures for conserving land and water resources.
3. Increase the level of protection from flooding and wetness problems on agricultural land in order to increase economic returns and assure sound profitable agriculture in the future.
4. Accelerate the going land treatment program in order to realize the benefits from the planned structural measures of the project.
5. Install any project measures in a manner that will be least damaging to wildlife habitat and will minimize any losses to fish and wildlife where applicable.

Alternative considerations include:
1. Land treatment only
2. Land use more tolerant to wet soils conditions
3. Floodproofing and land treatment
4. Land treatment and channel work considering various sizes of channels related to different levels of flood protection and degrees of drainage
5. No action - Continuation of present conditions and trends.

APPENDIX V – PROJECT INFORMATION SHEET CONTINUED



APPENDIX VI – JULY 10, 1975 LETTER

July 10, 1975

Mr. Alton Mangum
State Conservationist
U.S. Soil Conservation Service
P.O. Box 1630
Alexandria, Louisiana 71301

Dear Sir:

Personnel of the Louisiana Wildlife and Fisheries Commission have reviewed the undated, unsigned Draft EIS for the Bayou Grosse Tete Watershed. We appreciate the manner by which you recognized the input of this agency into project planning and our contribution of environmental information, but we are disappointed to see that sheet erosion and sediments will increase from the present level despite project implementation. Particularly disturbing is the projected increase in sediments entering False River which is one of the most heavily used lakes in Louisiana. Since a large portion of the drainage into this lake is from pasture and woodlands, we must assume that the increase in sediments will result in project induced conversion to row crop agriculture. The channel systems which will adversely effect False River are the M-1-L-1 system and the M-2-L-2 system.

Further attention should be given to reducing sediments and erosion to levels below those presently experienced in the project area. The project map of benefited areas (Appendix E) demonstrates drainage benefits to woodlands and various wetlands. Improvement in drainage in such areas has historically resulted in land clearing and conversion to row crop agriculture with its attendant increase in erosion rates. Also increased levels of protection will result in conversion of pastures to row crop. Not only will such conversion of pasturelands adversely effect water quality, fish and wildlife, but the increased runoff, erosion, and sedimentation will interfere with the proper functioning of project measures, reduce project life, and increase maintenance cost. One method of avoiding these problems is for the project sponsors to develop and implement land use zoning regulations. The SCS should investigate such a program as a part of the watershed plan.

APPENDIX VI – JULY 10, 1975 LETTER CONTINUED

In order to determine the effectiveness of the total watershed plan, it is suggested that the scope of joint inspections (page II-26) be enlarged to include determination of (1) percent of land treatment measures installed, (2) percent of compliance with conservation farm plans, (3) and acreages of land use changes since such factors are more important than channels in controlling erosion and sedimentation.

The sentence on page II-48 regarding gulf pipefish and southern hog chocker should be reworded to indicate that occurrance of these species is unusual in the project area.

It is doubtful that wildlife habitat will be enhanced by the project (page II-67), on the contrary, wildlife habitat will probably be reduced. Wildlife habitat retained in the project area can hardly be considered a land treatment measure resulting from the project as implied on Page II-7. Only actual beneficial habitat manipulations should be classified as habitat management.

Thank you for the opportunity to comment on the unsigned, undated draft on this project.

Sincerely,

J. Burton Angelle
Director

JBA:MW:tam

APPENDIX VII – OCTOBER 22, 1975 LETTER

U S Dept of the Interior
Fish and Wildlife Service
Box 4753, USL
Lafayette, Louisiana
70501

October 22, 1975

Mr. Alton Mangum
State Conservationist
U. S. Department of Agriculture
P. O. Box 1630
Alexandria, Louisiana 71301

Dear Sir:

This is in reply to your letter dated September 17, 1975, in which you requested our review and comments concerning the Unsigned Draft Bayou Grosse Tete Watershed Plan. Our comments on this draft are intended as a planning aid to your agency and do not represent the official views of the Department of the Interior.

The Bayou Grosse Tete Watershed contains two major areas of valuable fish and wildlife resources: Portage Swamp and False River. Portage Swamp consists of approximately 30,000 acres of woodlands and provides necessary habitats for numerous species of wildlife. The work plan indicates that much of the channel which presently runs through Portage Swamp will not receive additional excavation. Members of your staff have informed us that most of the area is below the 16 foot contour line and thus will not be drained by the proposed channel work. Furthermore, land clearing of woodlands around the perimeter of Portage Swamp appears to have reached its limits unless additional drainage is provided. Thus, the present wildlife resources in the area will probably be protected from further drainage and subsequent land clearing practices even with the completion of channelization as described in the work plan. The Soil Conservation Service should insure that the Portage Swamp is preserved in its present state.

False River is a 3,300 acre lake which supports an excellent population of sport and commercial fish. It offers tremendous

RECEIVED
JAN 8 1976
FISHERIES SECTION

APPENDIX VII – OCTOBER 22, 1975 LETTER CONTINUED

recreation potential, not only from fishing but from other water related activities as well. The large numbers of homes, camps, piers and boat ramps along the lake are evidence of its popularity. We are concerned with the increased sediment which is predicted to enter False River and the adverse effects of this increase on the fishery resources and related activities of the lake. According to the work plan, the M-1 and M-2 channel systems will both have outlets into False River. These channels are presently in existence and drain woodlands, pasture, and row crop fields. The work plan indicates that the majority of the channels within these systems are scheduled for additional excavation. Construction-induced sediment increases are expected for approximately one year as structural measuees are installed. Future sediment yields resulting from sheet erosion are supposed to be decreased by the installation of land treatment measures by the individual land owners. However, the installation period for the land treatment measures is 10 years. Thus the critical period for False River would be after the structural measures are completed and before land treatment measures are installed. Although this period may amount to only a few years the lake could be subjected to extremely high levels of suspended sediments, nutrients and agricultural chemicals. Such an introduction of elements into an aquatic system such as False River could irretrievably damage its water related resources. Additionally, the fact that the installation of land treatment measures is at the discretion of the individual land owners does not guarantee that the measures will be installed. Finally, even if land treatment measures are 100 percent installed it is doubtful that they can offset the increase in sediment which will probably occur due to increased row crop agriculture induced by more efficient drainage capabilities.

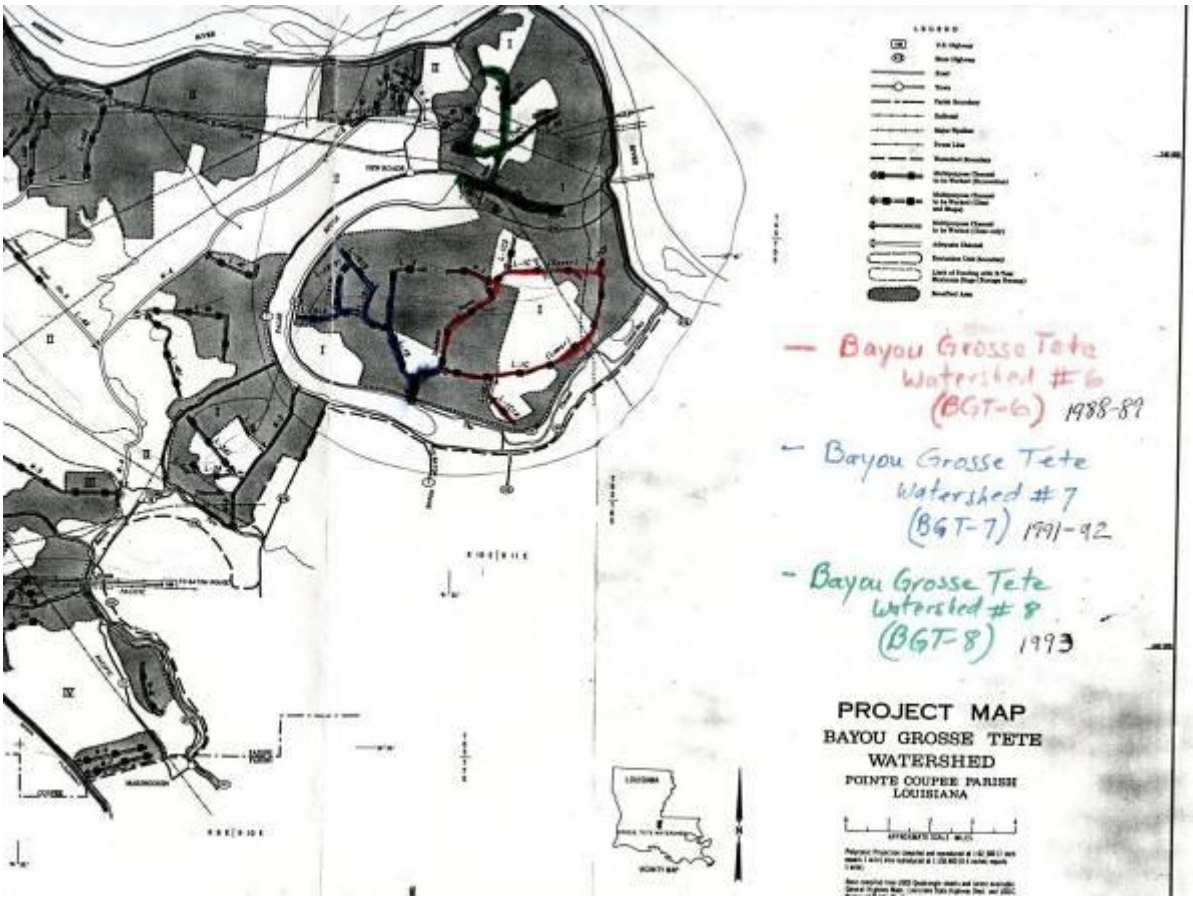
The Fish and Wildlife Service realizes that one of the primary purposes of the project is to improve the agricultural resources of the watershed by improving drainage. However, we feel that the resources of False River must be protected and that improvement of the quality of the water entering the lake should be a purpose of the project. The measures described in the work plan are insufficient in regard to this purpose. Therefore, we recommend that the Soil Conservation Service review the plans for the M-1 and M-2 channel systems and determine what structural measures or other design features could be implemented to substantially reduce the sediment load to False River.

We appreciate the opportunity to review and comment on the Bayou Grosse Tete work plan.

Sincerely yours,

Joseph E. Burgess, Jr.
Biologist-in-Charge

APPENDIX VIII – BGT PROJECT MAP



APPENDIX IX – TYPEMAPS

February 8, 1983

TO: James Manning, Coordinator, Aquatic Plant Research & Control Section

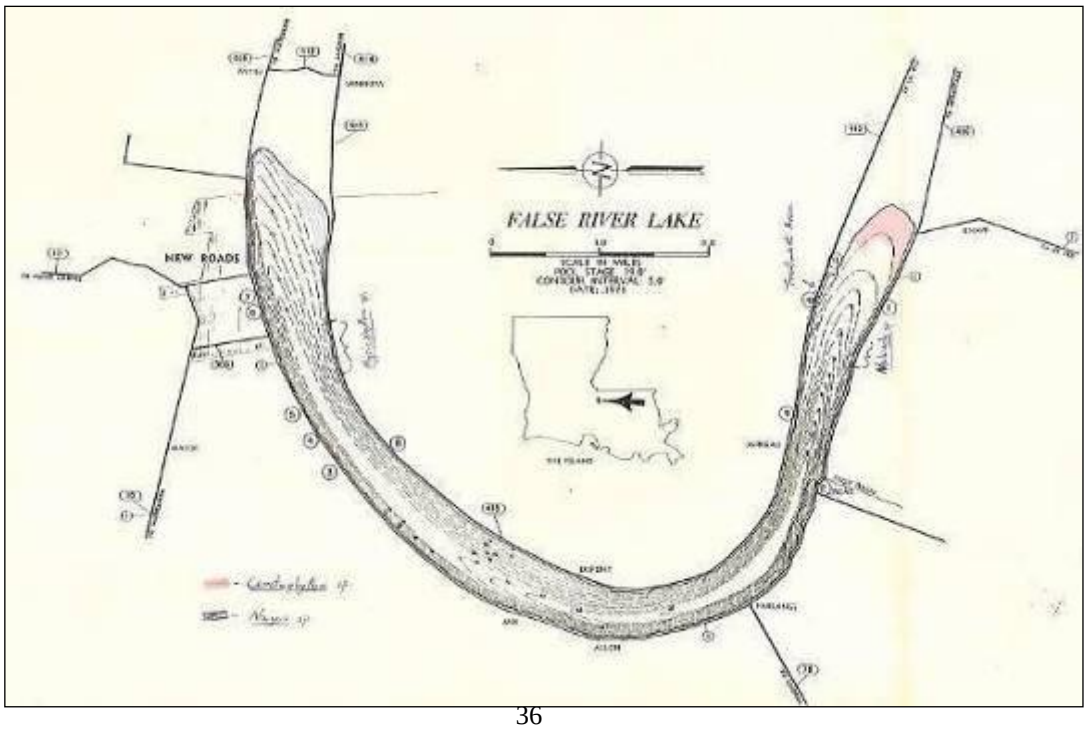
FROM: Larry H. Hartmann, Region III Aquatic Biologist

SUBJECT: 1983 Condition Assessment Report, False River Lake (Pointe Coupee Parish)

Section personnel surveyed False River Lake, Pointe Coupee Parish, on September 1, 1983, in order to assess aquatic vegetation levels.
Results are as follows:

- South Flats Area – Mostly coontail (Ceratophyllum sp.), dense and reaching surface from 0 to approximately 3.5 ft. depth; moderate and mostly submerged out to 5 – 5.5 ft. depth. Area treated in 7/83 with an Aquathol/Cutrine/Hydrothol mixture along lake side of Pecan Island is clean. A small area of lotus (Nelumbo sp.) exists along the Hwy. 1 shore.
- Central Lake Area – Good condition, with the exception of scattered dense but narrow fringes in 0-3 ft. depth between boat docks, mostly coontail. A moderate to heavy fringe of Myriophyllum sp., extending for approximately 0.3 – 0.5 miles along the upper Hwy. 413 bank, was treated in 7/83 with an injection of 2,4-D Amine. This area remains clean.
- North Flats Area – Extensive mats of heavy Najas sp. Infestation in waters 0-3 ft. in depth. Boat lanes opened in 7/83 with an Aquathol/Cutrine/Hydrothol mixture area relatively clean and passable, but with spotty results. Several large matted areas in this vicinity were treated with the above chemical mixture in late 8/83 with good results. A narrow but intermittently dense fringe of coontail interspersed with naiad runs along Hwy. 1 bank for 1.5-1.75 miles. Treatment in 8/83 proved to achieve poor results. Marine distress marker dye was used in this application.

In summary, although extensive mats of coontail and naiad exist (mainly in the South Flats and North Flats areas) in False River Lake, chemical treatment of boat lanes and dock areas provided sufficient control to allow public use of those facilities. The remainder of the lake is in reasonable good condition.



June 1, 1984

MEMORANDUM

TO: Louie V. Richardson, Section Research Biologist
FROM: Larry H. Hartmann, Region III Aquatic Biologist
SUBJECT: 1984 False River Vegetation Survey

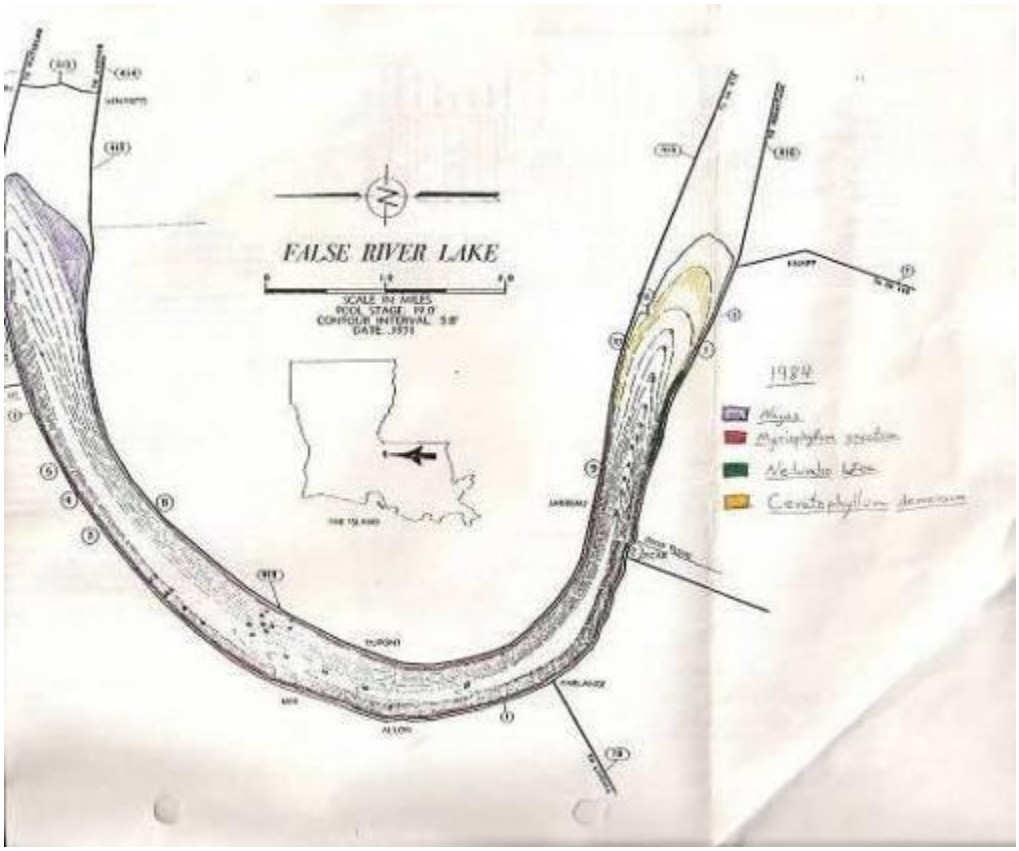
False River Lake, Pointe Coupee Parish, was surveyed on Friday, May 25, 1984 for aquatic vegetation composition and severity. The following are the findings of that annual survey:

North Flats – By far the most severe area of plant infestation. Heavy Najas sp. Growth over almost the entire area topped out in up to 4 feet of depth. Weed beds extend out at least to the 5 -6 foot depth but have not reached surface. Some scattered Ceratophyllum demersum is intermingled in the stand. A fairly heavy layer of filamentous algae scum overlays most of the area's weed beds. Area piers and docks have restricted access.

Central Lake Area – Extending down from the North Flats area, most of both sides of the central lake were found to have moderate to heavy infestations of Myriophyllum spicatum out from the banks to a depth of 4 – 5 feet. This is a much increased acreage as compared to last year's watermilfoil problem. Quite a considerable number of boat docks, piers, and boat housed are being affected. The area of Nelumbo lutea between Oscar Bayou and the South Flats has also expanded to a strip approximately 200 yards long.

South Flats Area – Ceratophyllum with some Najas accounts for the bulk of the scant vegetation in this area. No immediate problem is expected.

Bayou Chenal – A spotty but possibly troublesome fringe of Najas/Ceratophyllum exists all along the bayou and deserves periodic observation. The bayou is overlain with a moderate covering of duckweed which may become a problem soon.



FALSE RIVER

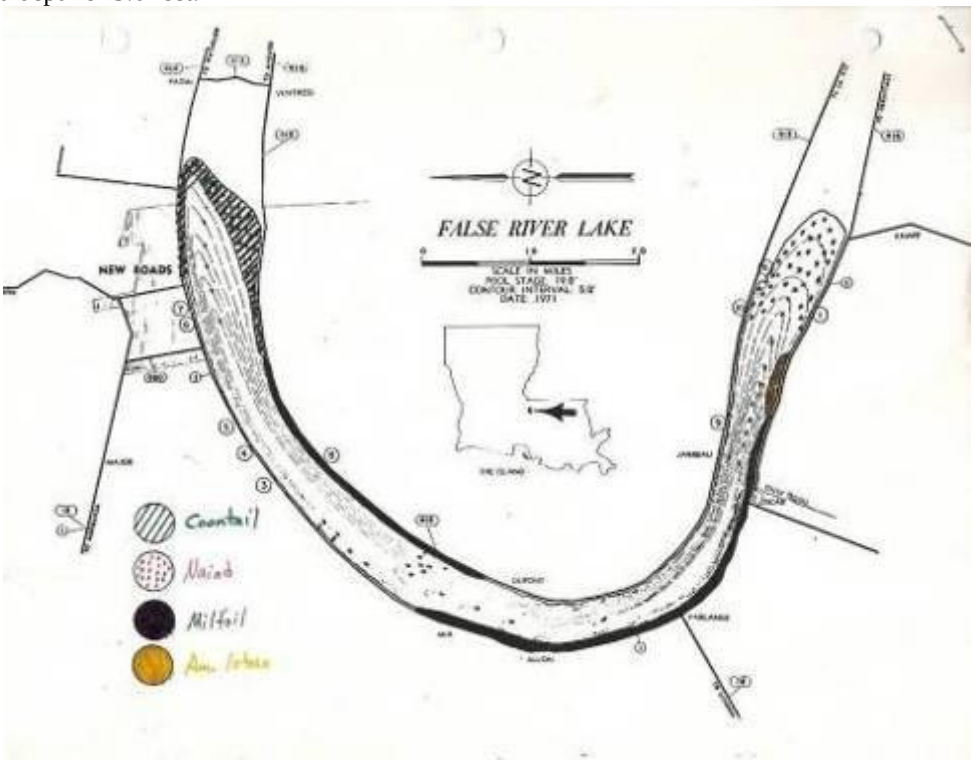
September 1985

On September 17, 1985, False River, Pointe Coupee Parish, was surveyed to determine presence and severity of aquatic plants.

The North Flats area was by far the most severe area of plant infestation. Moderate to heavy infestation of coontail (Ceratophyllum demersum) and naiad (Najas sp.) were common in the entire area extending out to a depth of 7.0 feet. In most areas these species had topped out and were overlaid by a heavy layer of filamentous algae scum. A moderate infestation of Eurasian milfoil (Myriophyllum spicatum) occurred on the upper end of the east shoreline and extended from the shoreline out to a depth of 5.0 feet. Numerous piers in the vicinity of New Roads continue to have restricted access.

Both sides of the central portion of the lake were found to have light to moderate infestations of milfoil extending from the banks to a depth of 3.5 feet. Scattered clumps of coontail were found along the Highway 1 shoreline in water up to 3.0 feet. The area of American lotus (Nelumbo lutea) between Oscar Bayou and the South Flats in approximately 250 yards long and extends from the bank out to a depth of 6.0 feet.

In the south Flats, a moderate to heavy infestation of naiad comprises the bulk of vegetation present in this area. These beds extend from the bank out to a depth of 5.0 feet. Light to moderate patches of milfoil were found in waters up to a depth of 5.0 feet.



FALSE RIVER

September 1986

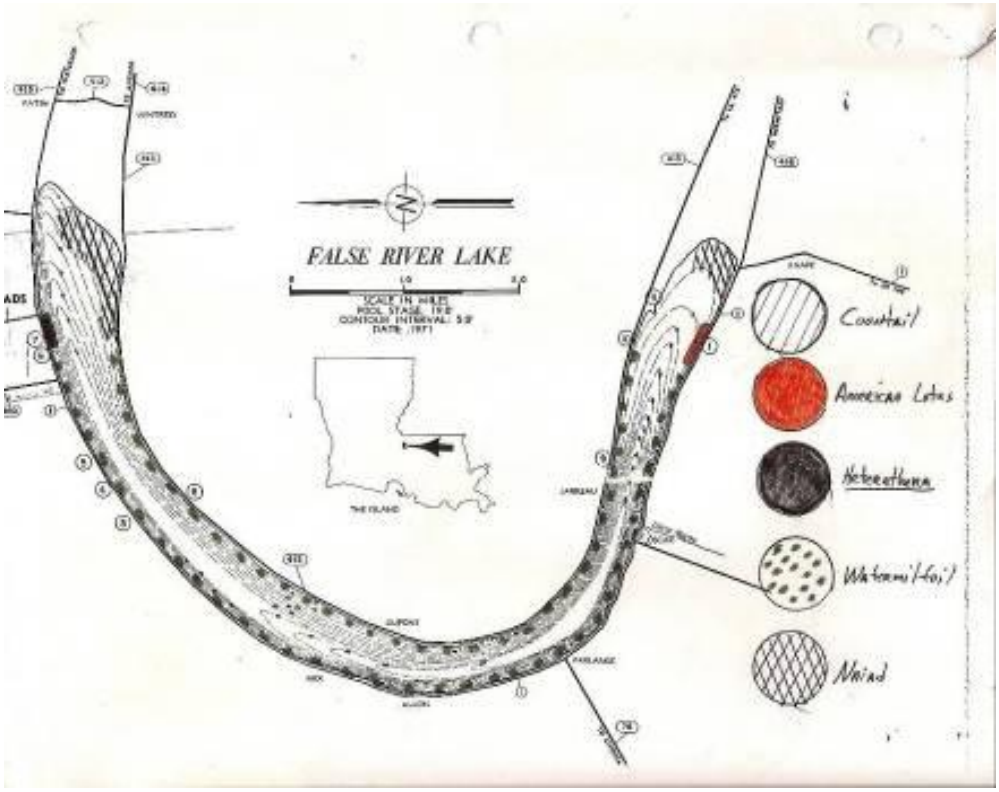
False River, Pointe Coupee Parish, was surveyed to determine aquatic vegetation presence. A moderate to heavy infestation of coontail (Ceratophyllum demersum) and naiad (Najas sp.) was again covering a large portion of the area know as the North Flats. These plants were located in water up to 7.0 feet in depth and were covered with a moderate layer of filamentous algae. A heavy infestation of Eurasian milfoil (Myriophyllum spicatum) occurred along a large portion of the east shoreline extending out to a depth of 5.0 feet. Both shorelines in the central area of the lake had light to moderate fringe of milfoil which extended out to a depth of 3.5 feet.

American lotus near the South Flats on the Highway 1 shoreline covers an area approximately 250 yards long and extends from the shore out into water 7.0 feet in depth.

The South Flats area contained a moderate to heavy infestation of naiad mixed with coontail both of which were overlaid with a mat of filamentous algae. These plants were found in areas extending to a depth of 6.0 feet.

Mud plantain (Heteranthera dubia) occurred in scattered patches near the shoreline throughout the lake, but was very common near the public boat landing at New Roads. There was a heavy infestation in this area which extended out to a depth of 6.0 feet.

Other plants observed during this survey were water paspalum (Paspalum sp.), giant duckweed (Spirodela polyrhiza), and water hyacinths (Eichhornia crassipes).



FALSE RIVER

September 1987

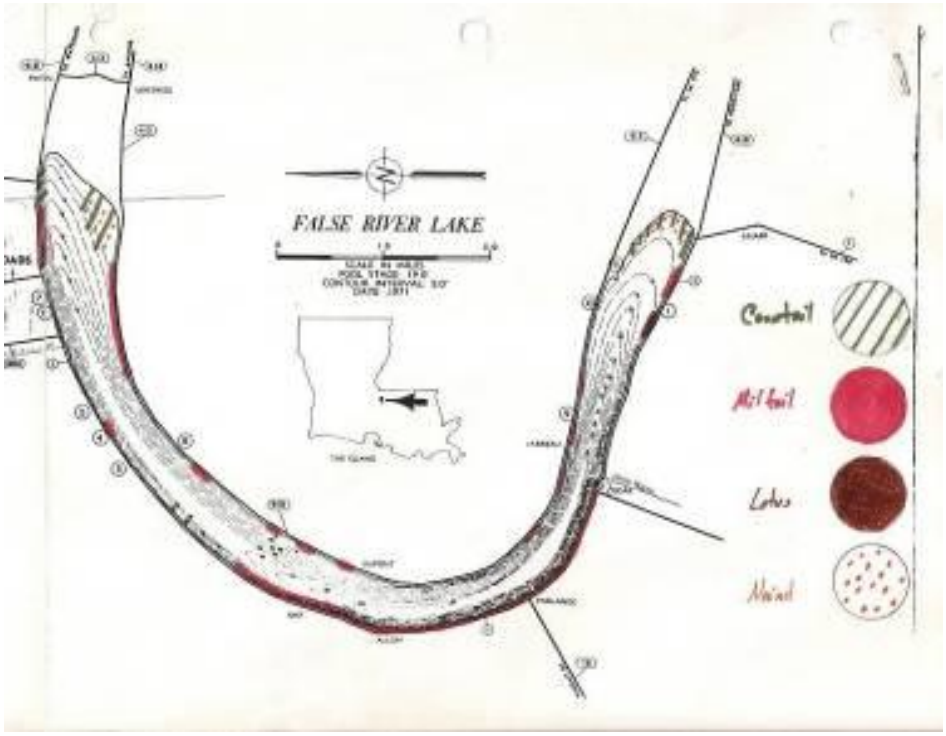
False River, Pointe Coupee Parish, was surveyed on September 22, 1987 to determine aquatic weed composition and severity.

Once again, the heaviest infestation of aquatic plant growth was located in the areas known as “the flats”, both north and south. On the north flats, coontail (Ceratophyllum demersum), Eurasian watermilfoil (Myriophyllum spicatum), and southern naiad (Najas guadalupensis) were the dominant plant species. A moderate to heavy infestation was observed in water up to 5.0 feet deep. Weed beds were covered with filamentous algae in areas where submergent vegetation reached the water surface.

A heavy infestation of coontail mixed with naiad and milfoil were present in the south flats area of the lake. Vegetation extended from the shoreline outward into the lake to a depth of 5.5 feet. The area below the mouth of Bayou Chenal which was treated with granular Aquathol earlier this summer remains relatively clean. The area of American lotus (Nelumbo lutea) adjacent to Highway 1 covers an area approximately 300 yards long and plants ere observed growing in water up to 10 feet deep. A small area of lotus has become established near the shoreline of the extreme southern portion of the lake. These plants are located in water less than 1 foot deep and pose no immediate problem

Extending down from the north flats, patchy areas of watermilfoil occurred along both shorelines out to a depth of 5.0 feet. Occasionally, moderate to heavy infestations were found, but the overall acreage of infestation appears to be less than last year. Scattered patches of mud plantain (Heteranthera dubia) were also found in these areas.

Other plants observed during this survey were water hyacinths (Eichhornia crassipes), giant duckweed (Spirodela polyrhiza), and elephant ear (Colocasia sp.).



FALSE RIVER

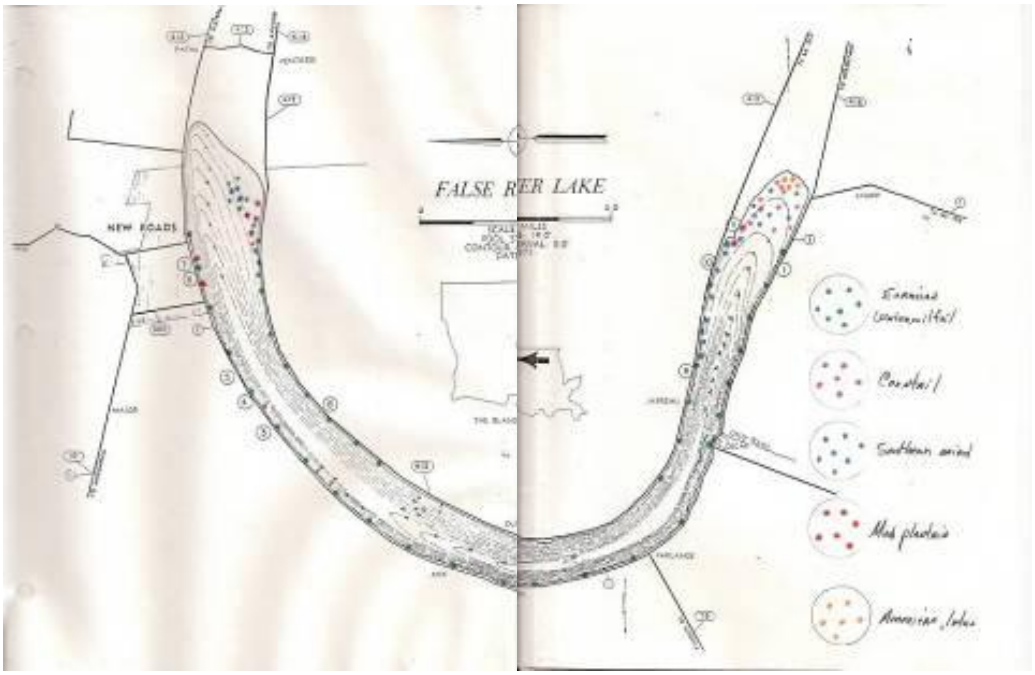
October 1988

On October 4, 1988, False River was surveyed to determine the presence and composition of aquatic vegetation. As was reported last year, the heaviest infestation of aquatic plant growth was observed in the north and south flats areas. Eurasian watermilfoil (Myriophyllum spicatum), coontail (Ceratophyllum demersum), and southern naiad (Najas guadalupensis) were the dominant species in the north flats. A moderate to heavy infestation of these plants was located near the "island" side of the lake and extended out toward the middle of the lake in water up to 6.0' in depth.

In the south flats area, a heavy infestation of coontail, naiad, and milfoil were observed in water up to 5.0' deep. The lotus (Nelumbo lutea) stand located near the extreme southern shoreline of the lake has increased in area and now covers approximately 3-4 acres. During this survey, there was no indication of any lotus in the area adjacent to Highway 1 as reported in the past. This could be attributed to the fact that these plants ere treated with herbicides last year at the request of nearby camp owners.

A moderate to heavy infestation of watermilfoil was found along both shorelines between the north and south flats in water up to 5.5' in depth. Mud plantain was also observed in these areas and appears to be more common than in years past.

Water hyacinth (Eichhornia crassipes) and duckweed (Spirodela sp.) were also observed during this survey.

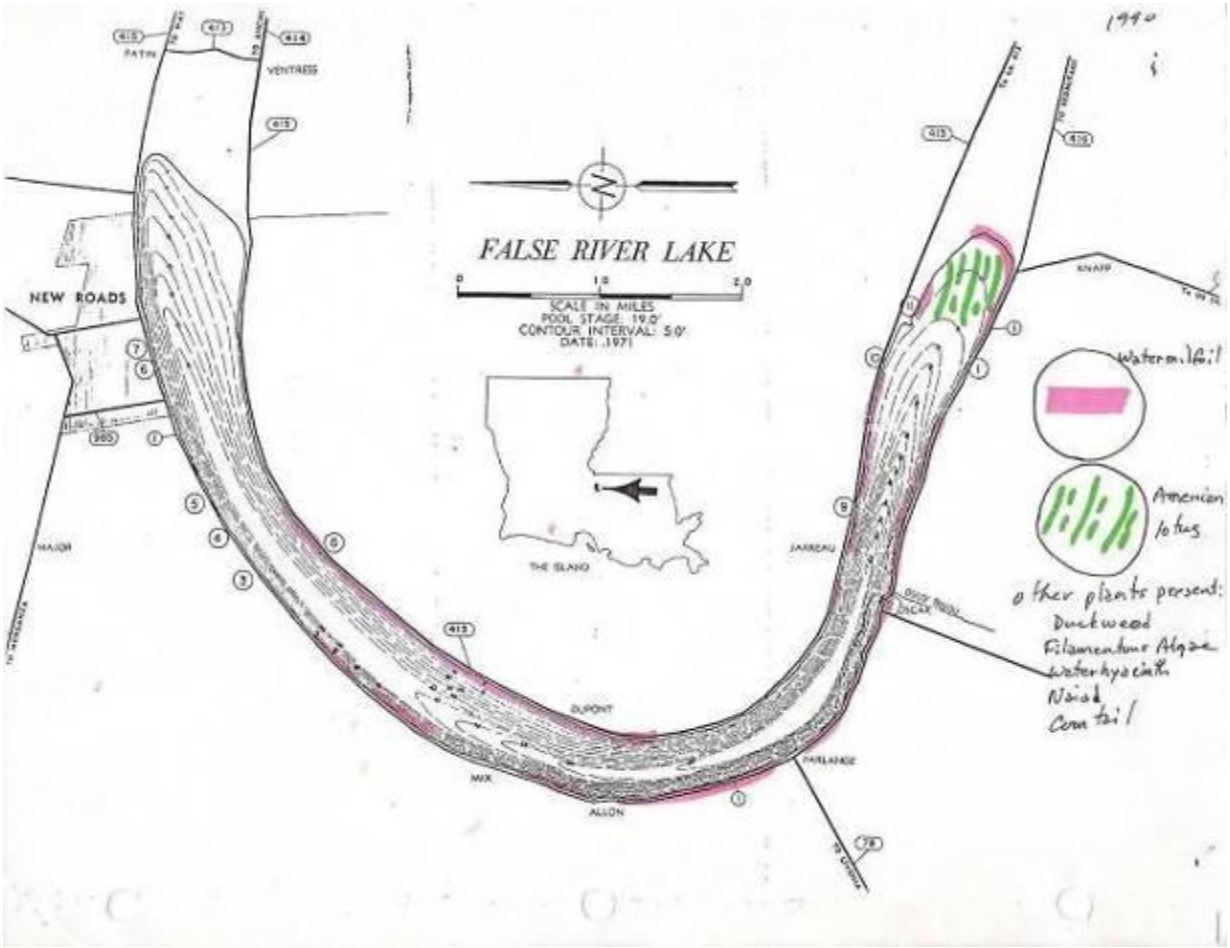


On October 8, 1990,
False River, Pointe Coupee Parish was surveyed to determine aquatic vegetation composition and severity.

The heaviest infestation of aquatic plant growth was found in the south flats. Watermilfoil (Myriophyllum spicatum), coontail (Ceratophyllum demersum), water stargrass (Heteranthera dubia) and naiad (Najas guadalupensis) were the dominant submersed species of plants found. These species were found in water 2.5' to 5.0' deep. A dense stand of American lotus (Nelumbo lutea) was also found in the south flats covering 4 -5 acres.

A moderate to light infestation of watermilfoil was found along both shorelines between the north and south flats in water up to 5' deep. The north flat was clear of aquatic plants.

Other plants observed were duckweed (Lemna minor), water hyacinth (Eichhornia crassipes) and filamentous algae.



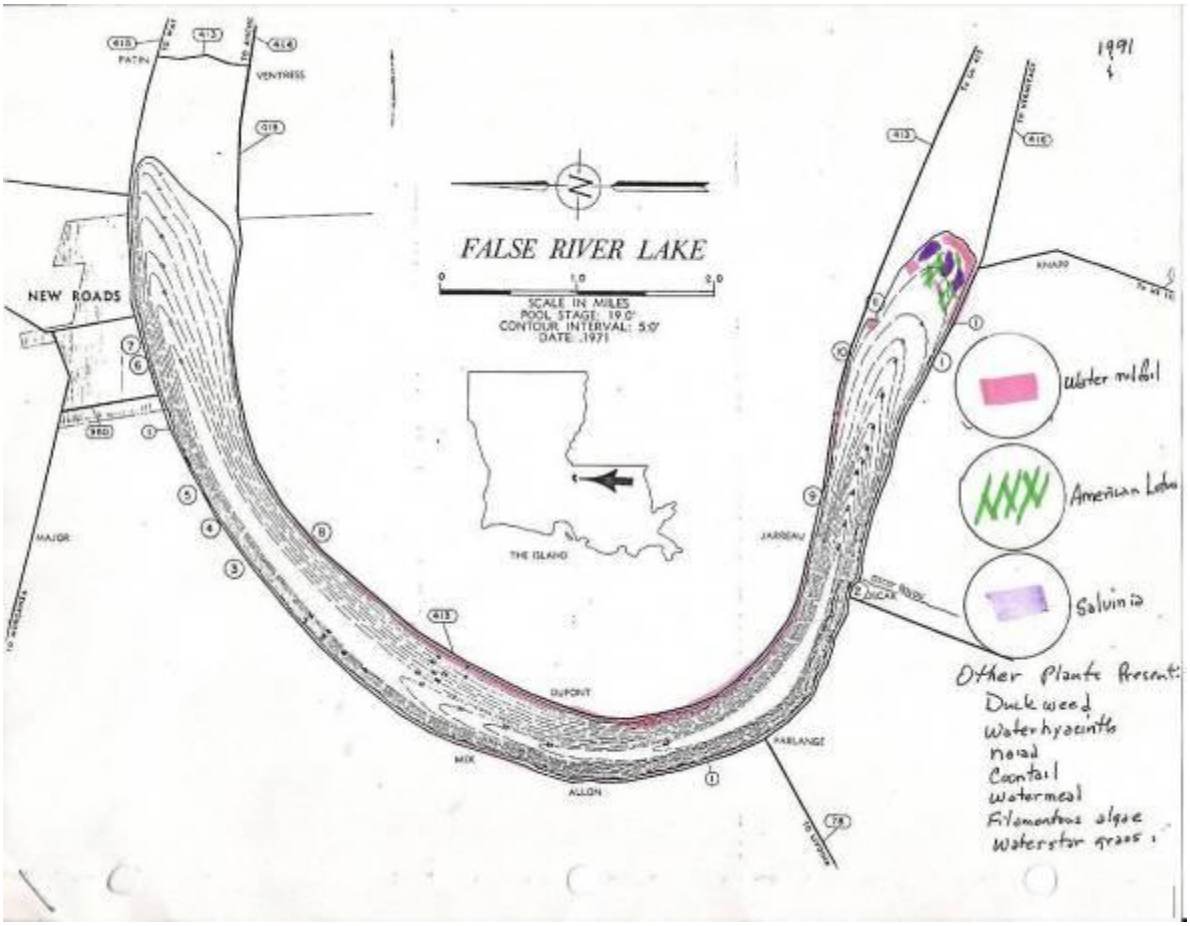
On September 24, 1991, False River, Pointe Coupee Parish was surveyed to determine the presence and composition of aquatic vegetation.

The southern flats again have the heaviest infestation of aquatic plant growth. Watermilfoil (Myriophyllum spicatum) was the dominant submerged plant in the south flats. Coontail (Ceratophyllum demersum) was intermingled in the watermilfoil beds but was not as common as last year. American lotus (Nelumbo lutea) stand seems to be about the same size as last year (4-5 acres).

A light to sparse infestation of watermilfoil was found along both shorelines between the north and south flats in water up to 5' deep.

Again the north flat was clear of aquatic plants.

Other plants observed were duckweed (Lemna minor), water hyacinth (Eichhornia crassipes), watermeal (Wolffia spp.), salvinia (Salvinia rotundifolia) and water stargrass (Heteranthera dubia).

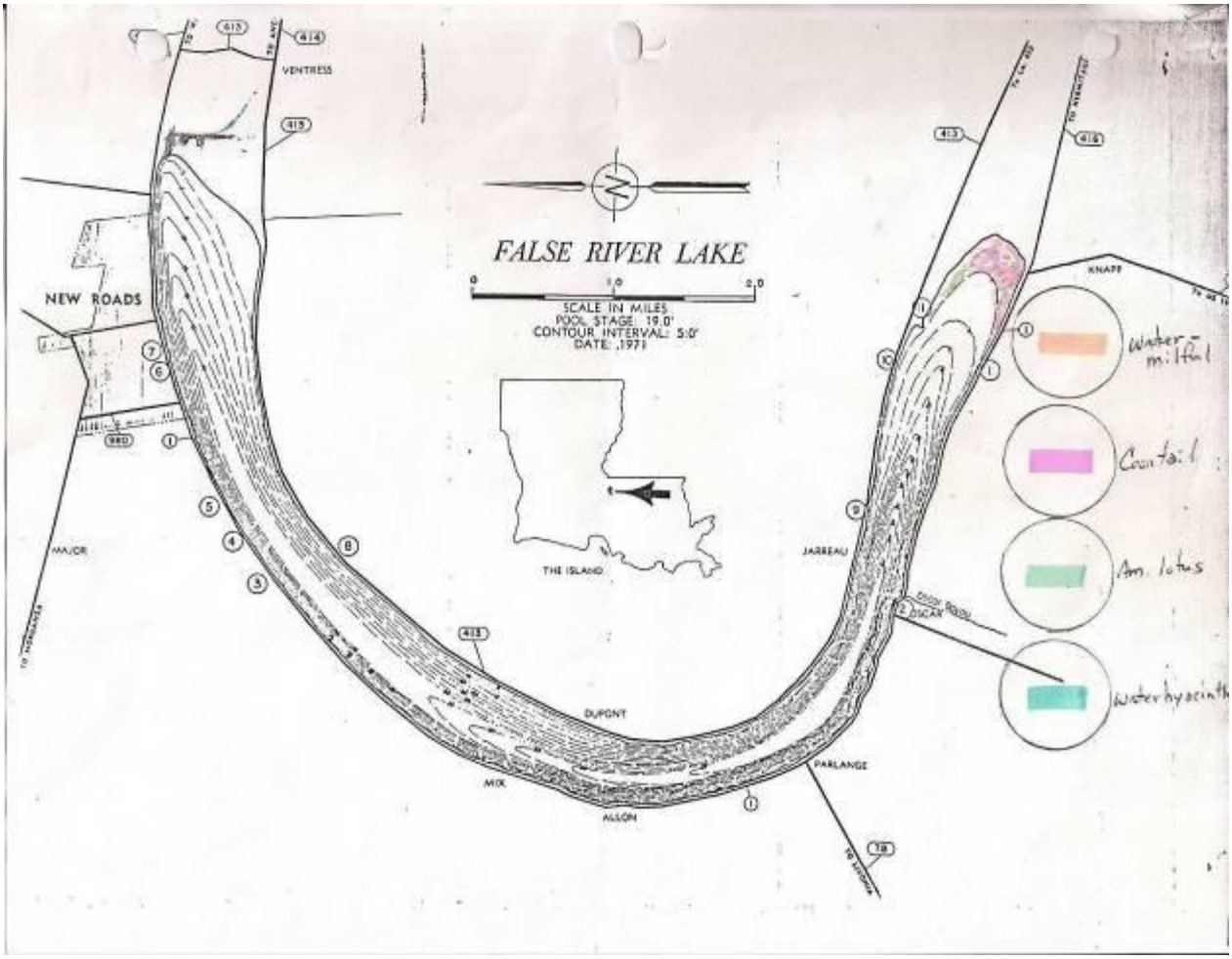


FALSE RIVER
OCTOBER 1992

On October 20, 1992, False River, Pointe Coupee Parish, was surveyed to determine presence and composition of aquatic vegetation.

The south flats again have the heaviest infestation of aquatic plant growth. Coontail (Ceratophyllum demersum) was the dominant submerged plant in the south flats. Watermilfoil (Myriophyllum spicatum) was intermingled in the coontail beds and again it seems that watermilfoil infestation has decreased. American lotus (Nelumbo lutea) stands have spread toward the opening of Bayou Chenal increasing its infestation from approximately 4-5 acres to 6-7 acres.

Other plants observed were duckweed (Lemna sp.) and water hyacinths (Eichhornia crassipes).



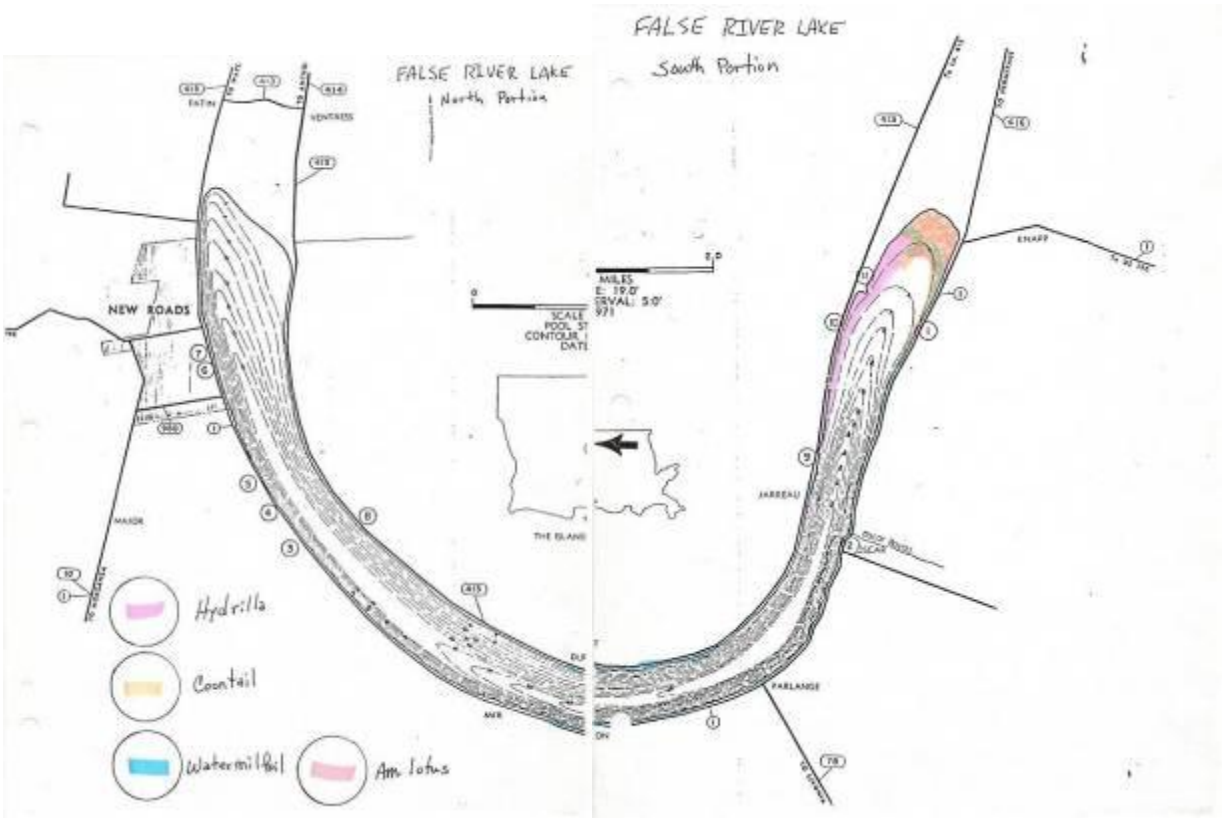
FALSE RIVER*

On September 28, 1993, False River, Pointe Coupee Parish, was surveyed to determine presence and composition of aquatic plants.

The south flats again have the heaviest infestation of aquatic plant growth. ***FOR THE FIRST TIME HYDRILLA (Hydrilla verticillata) WAS FOUND IN THIS LAKE.** Large mats were found adjacent the camps, boat landing and condominiums on the south end of the lake. Smaller infestations were found on both sides of the lake north to the Yacht Club.

The south flats also contained large stands of coontail (Ceratophyllum demersum), watermilfoil (Myriophyllum spicatum) and American lotus (Nelumbo lutea).

Other plants observed were duckweed (Lemnaceae), water hyacinths (Eichhornia crassipes), water stargrass (Heteranthera dubia) and naiad (Najas sp.).



FALSE RIVER
22 JUNE 1994

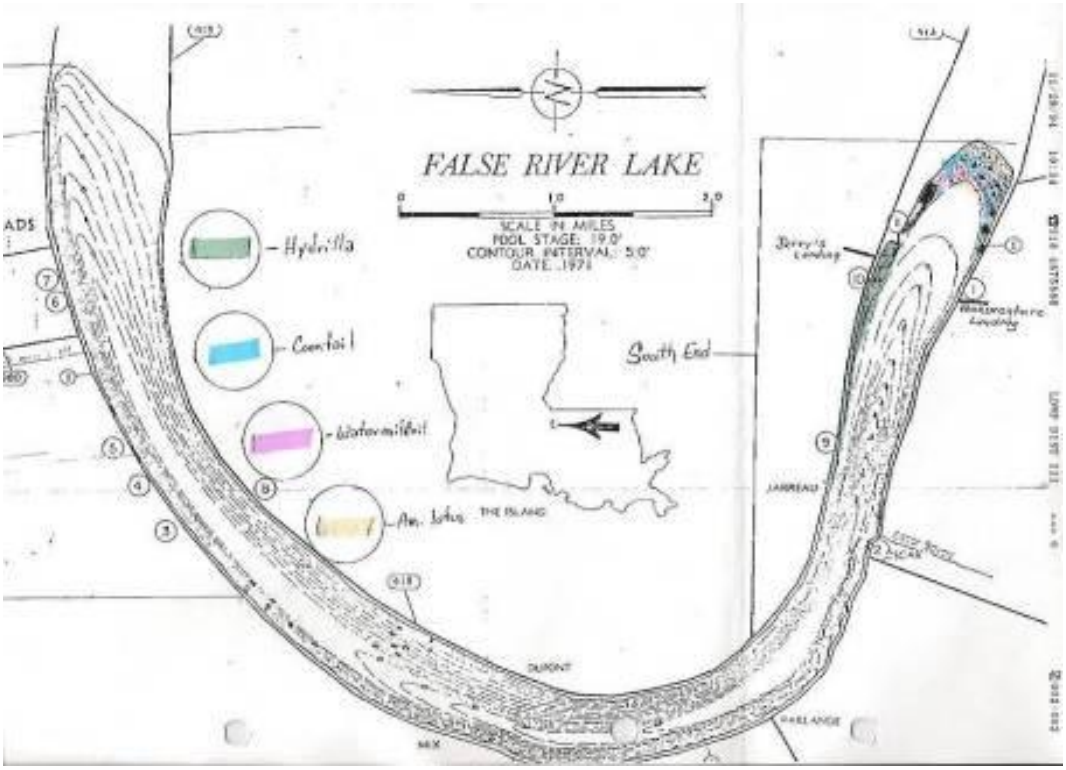
On June 13, 1994, False River, Pointe Coupee Parish, was surveyed to determine the presence and composition of aquatic plants.

Island Side (South End) – Hydrilla (Hydrilla verticillata) was found in dense mats from the boat landing (Jerry's Landing/ La Express) approx. 1.5 mi. WNW to approx. 1.0 mi. ESE. Hydrilla was observed rooted at 7 ft. depths in some locations. Algae, duckweed (Lemna sp.) and salvinia (Salvinia sp.) were intermingled and floating on top of these mats. The shoreline seemed to be almost aquatic plant free from 1.5 mi. WNW of the landing to the North End of the lake.

South End – This location was covered with a variety of aquatic plants. American lotus (Nelumbo lutea) covered most of this end of the lake, beginning approx. ¼ mi. ESE of Bayou Chenal outlet. Coontail (Ceratophyllum demersum) and Eurasian watermilfoil (Myriophyllum spicatum) were growing profusely under the cover of the lotus plants, coontail being the most predominant species. Duckweed, salvinia and algae were also present.

Bonaventure Side (From approx. ½ mi. ESE of this landing WNW to Oscar Bayou) – Coontail, milfoil, hydrilla, water stargrass (Heteranthera dubia) and naiad (Najas sp.) were present. Coontail was the predominant species but hydrilla was more evident in this location than it was last year. Hydrilla was observed in large patches and found intermingled within the other plants. From Oscar bayou to the North End very few aquatic plants were observed.

Surveyed by: Charles Biggar
Aquatic Habitat Biologist Project Coordinator



FALSE RIVER
25 SEP 1995

On Sept. 25, 1995, False River, Pointe Coupee Parish, was surveyed to determine the presence and composition of aquatic plants.

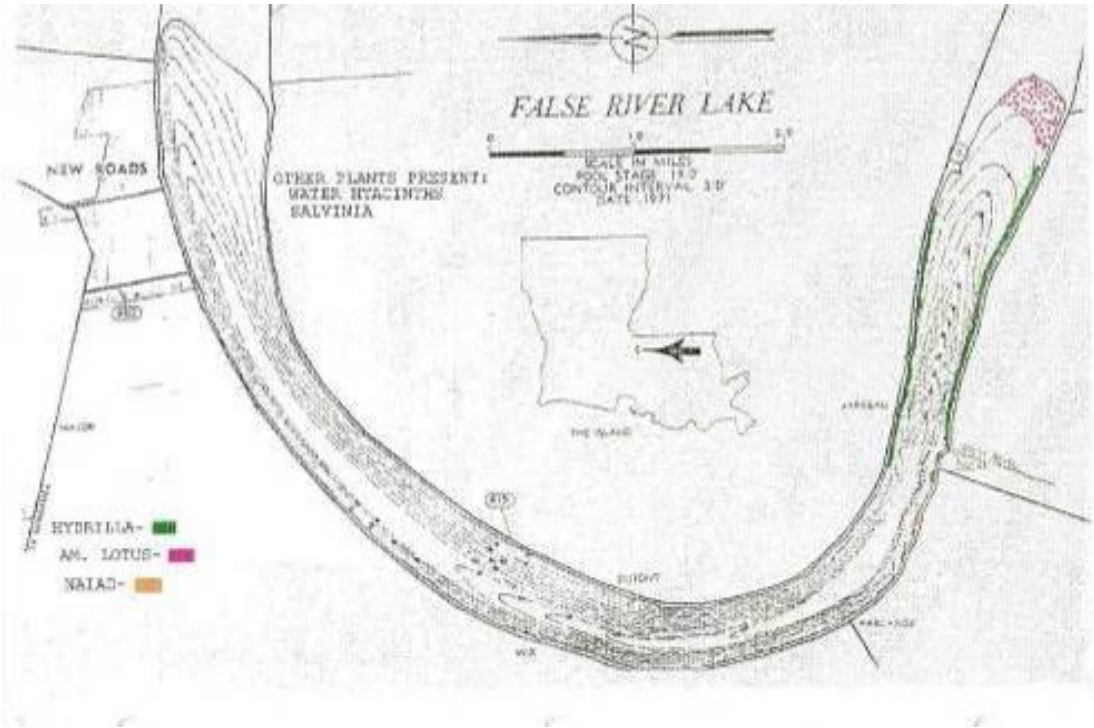
Island Side (South End) – Hydrilla (Hydrilla verticillata) was found in dense mats from 0.25 mi. below the boat landing (Jerry's Landing/ La. Express) to approx. 1.5 mi. WNW. Algae, duckweed (Lemna sp.), salvinia (Salvinia sp.) and water hyacinths (Eichhornia crassipes) were observed floating on top of these mats.

South Flats – This location was covered with American lotus (Nelumbo lutes). Some duckweed, salvinia and algae were present. The absence of coontail (Ceratophyllum demersum) and Eurasian watermilfoil (Myriophyllum spicatum) was noted.

Bonaventure Side (From approx. 0.5 mi. ESE of the landing to the Yacht Club) – Hydrilla has become the dominant aquatic plant in this location. Coontail, watermilfoil, water hyacinths and naiad (Najas sp.) were found intermingled inside the hydrilla mats.

From approx. 1.75 mi. WNW of Jerry's Landing/La. Express to the North End and form the Yacht Club to the North End the lake is without aquatic plants.

Surveyed by: Charles Biggar
Aquatic Habitat Biologist Project Coordinator



FALSE RIVER
15AUG1996

On Aug. 15, 1996, False River, Pointe Coupee Parish, was surveyed to determine the presence and composition of aquatic plants.

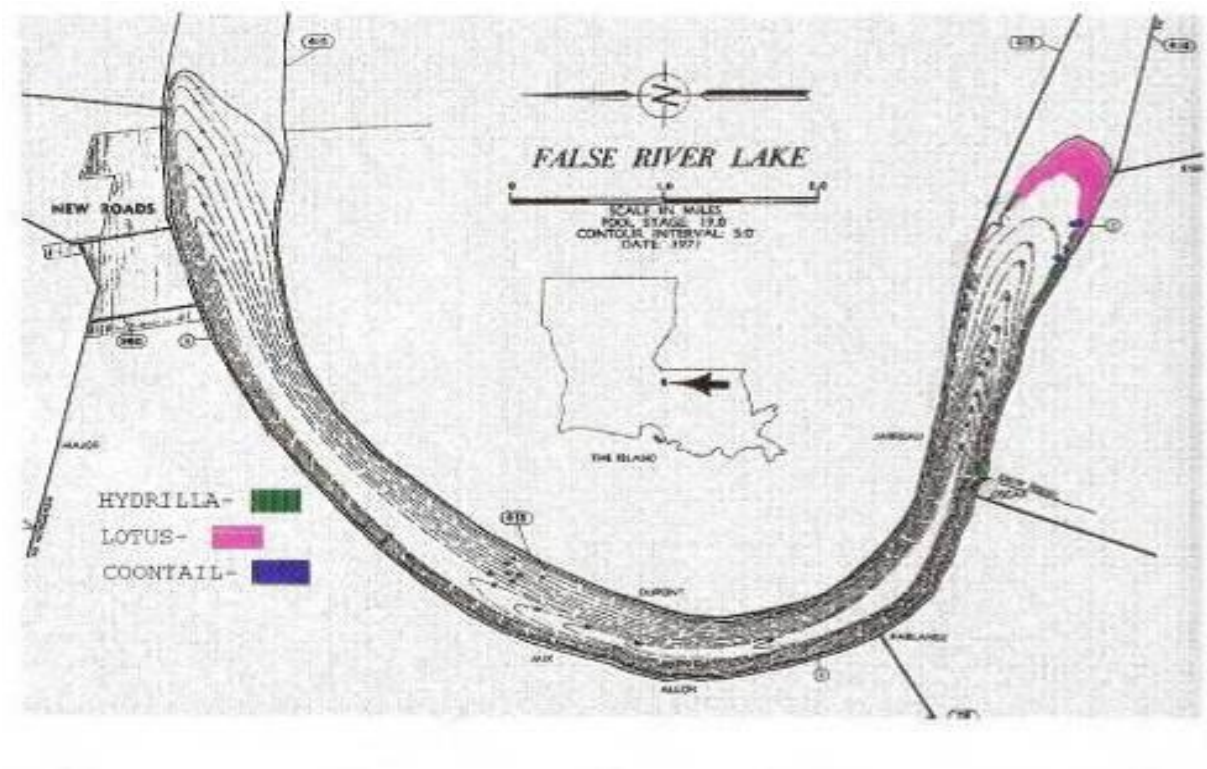
Island Side (South End) – scattered mats of hydrilla (*Hydrilla verticillata*) was found below the boat landing (Jerry's Landing/ La. Express) near camps and homes located on Bayou Chenal. Algae and some duckweed (*Lemna sp.*) were observed in these mats. A large stand of American lotus (*Nelumbo lutea*) was also present.

South Flats – American lotus has taken over this area of the lake. Some hydrilla and coontail (*Ceratophyllum demersum*) were also noted.

Bonaventure Side – Extensive hydrilla mats were found extending from the South Flats to Bonaventure Landing. Small patches of coontail were also found. A small infestation of hydrilla was also found at Oscar Bayou.

As in the recent past, no aquatic vegetation was found from mid-lake to the North Flats.

Surveyed by: Charles Biggar
Biologist Supervisor



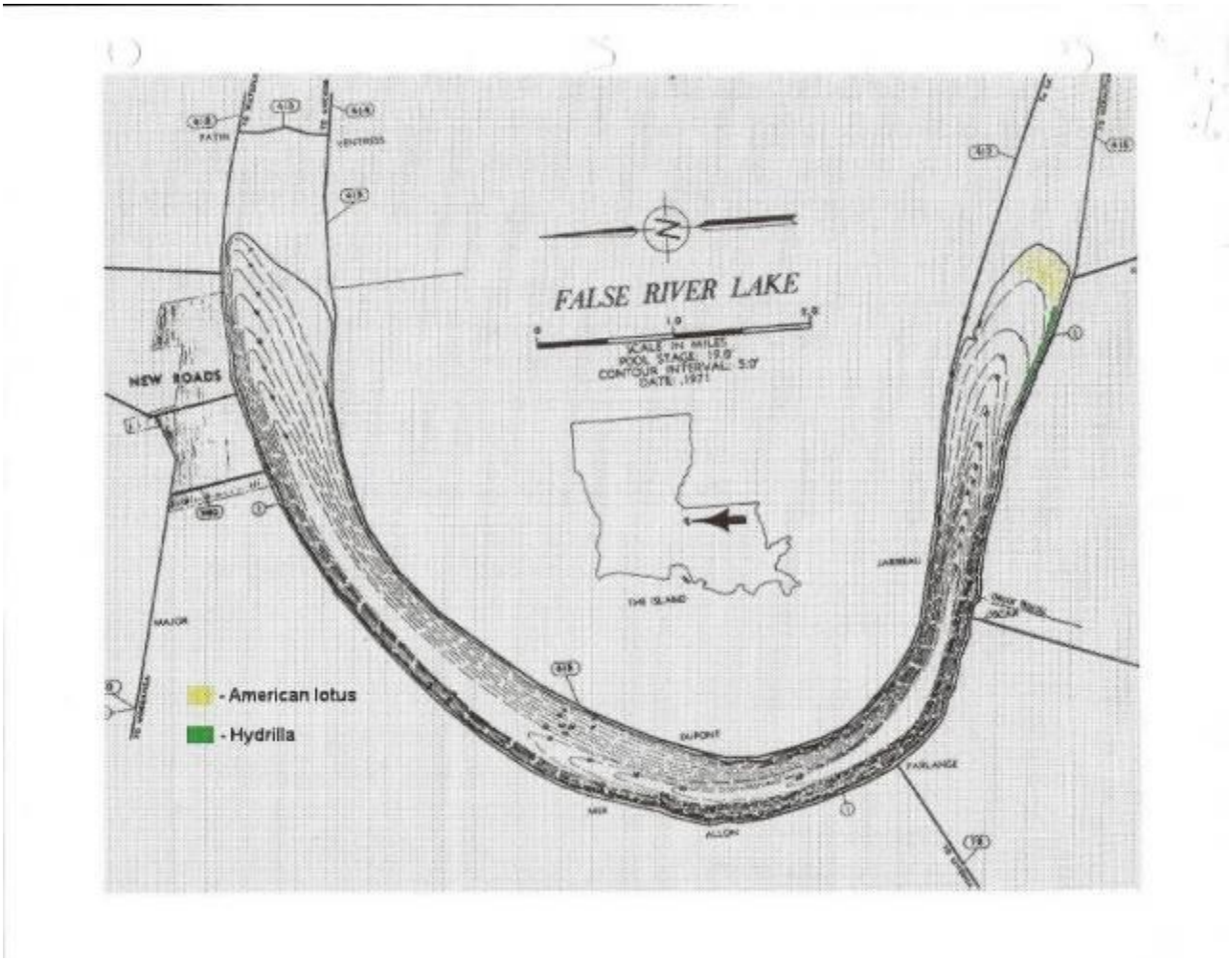
FALSE RIVER
30OCT1997

On Oct. 30, 1997, False River, Pointe Coupee parish was surveyed to determine the presence and composition of aquatic plants.

The only aquatic plants present this year were located in the south flats and along the State Hwy. 1 side of the lake. The south flats contained a sizable stand of American lotus (*Nelumbo lutea*) but this stand of lotus is not encompassing as much of the south flats as it did last year. Hydrilla (*Hydrilla verticillata*) mats begin where the lotus stand ends on the Hwy. 1 side of the lake to Bonaventure Landings. These mats extend form 5 feet to 20 feet from the bank.

This year, the lake has less aquatic vegetation than recorded in the last fourteen years.

Surveyed by: Charles Biggar
Biologist Supervisor

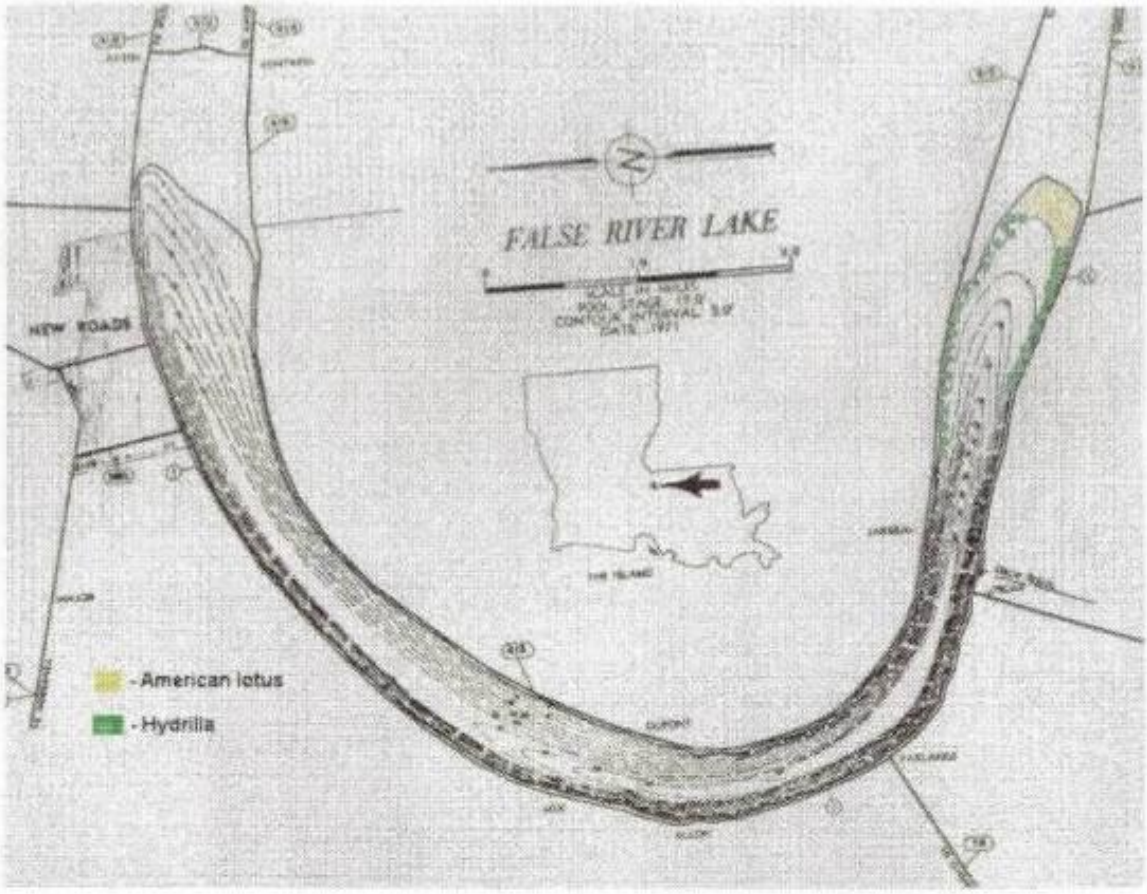


FALSE RIVER
15 OCT 1998

On Oct. 15, 1998, False River, Pointe Coupee parish was surveyed to determine the presence and composition of aquatic plants.

Aquatic plants present this year were located in the south flats and along the State Hwy. 1 and the Hwy 413 side of the lake. The south flats contained a sizable stand of American lotus (*Nelumbo lutea*). Hydrilla (*Hydrilla verticillata*) mats begin where the lotus stand ends on the Hwy. 1 side of the lake to Bonaventure Landing. These mats extend from 5 feet to 20 feet from the bank. On Hwy 413 side mats extended from South flats to 1 mile north along the shoreline. Southern Naiad was noted in the areas between Light House Canal and the Yacht Club ranging from a depth of 1 ft to 4 ft with a swath of approximately 20 ft.

Surveyed by: Karl Mapes
Biologist Supervisor



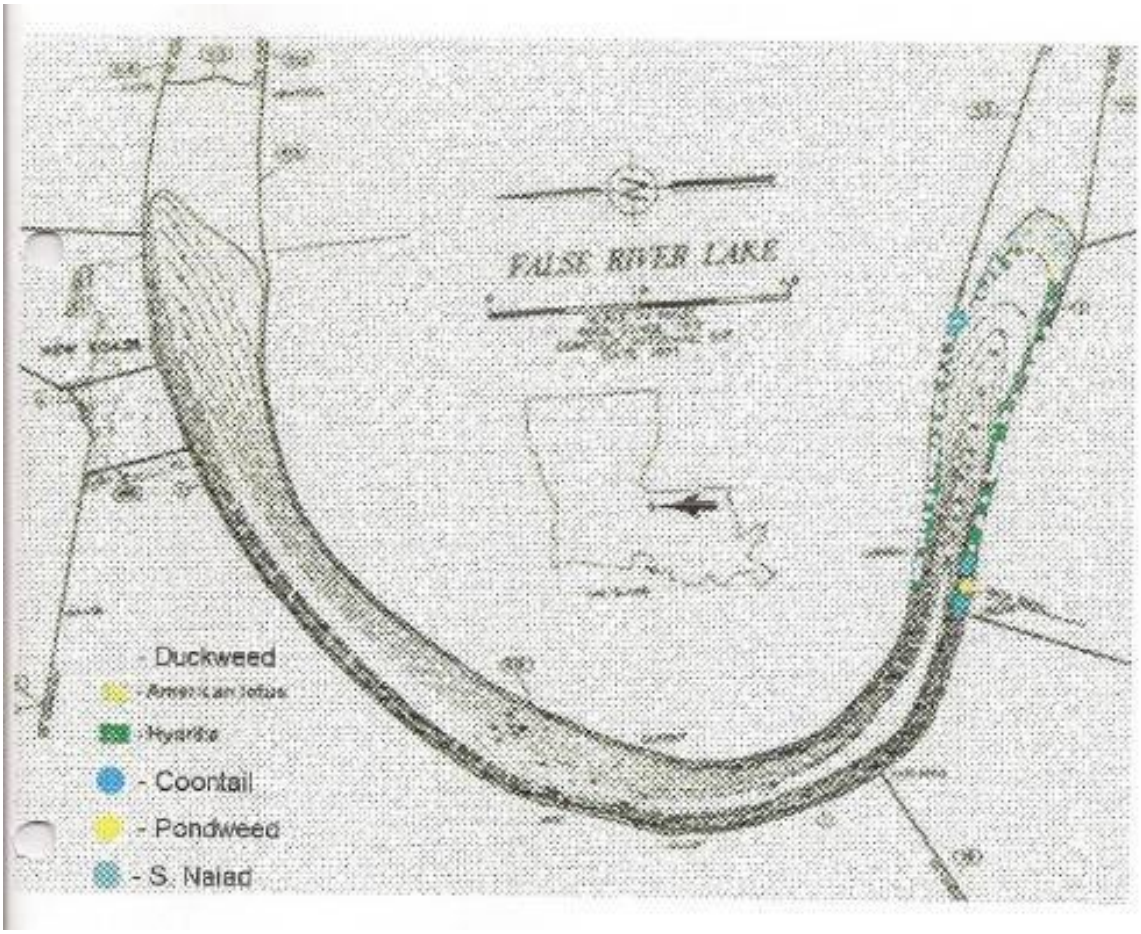
FALSE RIVER
16 September 1999

On September 16, 1999 False River, Pointe Coupee Parish was surveyed to determine the presence and composition of aquatic plants.

Aquatic plants present this year were located in the south flats and along the State Hwy. 1 and the Hwy 413 side of the lake. The south flats contained a sizable stand of American lotus (*Nelumbo lutes*) intermixed with coontail (*Ceratophyllum demersum*) and duckweed (*Lemna spp*.). Hydrilla (*Hydrilla verticillata*) mats begin where the lotus stand ends on the Hwy. 1 side of the lake and terminate past Bonaventure Landing at GPS coordinates 30° 36' 98" N & 91° 27' 64" W. These mats extend from 5 feet to 20 feet form the bank. On Hwy 413 side mats extended from South flats to coordinates 30° 37' 29" N & 91° 27' 78" W along the shoreline. Southern Naiad was noted in the areas between Light House Canal and the Yacht Club ranging form a depth of 1 ft to 4 ft with a swath of approximately 20 ft. A small plot of Pondweed (Potamogeton spp.) was found on the Hwy 1 side south of the Bayou Oscar.

Average depth of the South Flats area was 2.5 ft. This may be attributable to the lack of rainfall we experienced this year.

Surveyed by: Karl Mapes
Biologist Supervisor



FALSE RIVER
August 28, 2000

On August 25, 2000 False River in Pointe Coupee parish was surveyed to determine the presence and composition of aquatic plants.

The south end of the lake contained American lotus (*Nelumbo lutes*), which is the dominate plant, intermixed with coontail (*Ceratophyllum demersum*) and duckweed (*Lemna spp*.). Hydrilla (*Hydrilla verticillata*) mats begin on the margins of the lake where the lotus stand ends on the Hwy. 1 side of the lake and terminate past Bonaventure Landing. These mats extend outward from the shoreline 5 feet to 20 feet. On Hwy 413 side mats extended from South end of the lake to just north of Bueche's bar along the shoreline. Southern naiad (*Najas guadalupensis* (*Spreng*) *Magnus*) was noted South of Light House Canal extending to the Yacht Club ranging from a depth of 1 ft to 4 ft with a swath of approximately 20 ft. Two small plots of Pondweed (Potamogeton spp.) were found on the Hwy 1 side south of the Bayou Oscar.

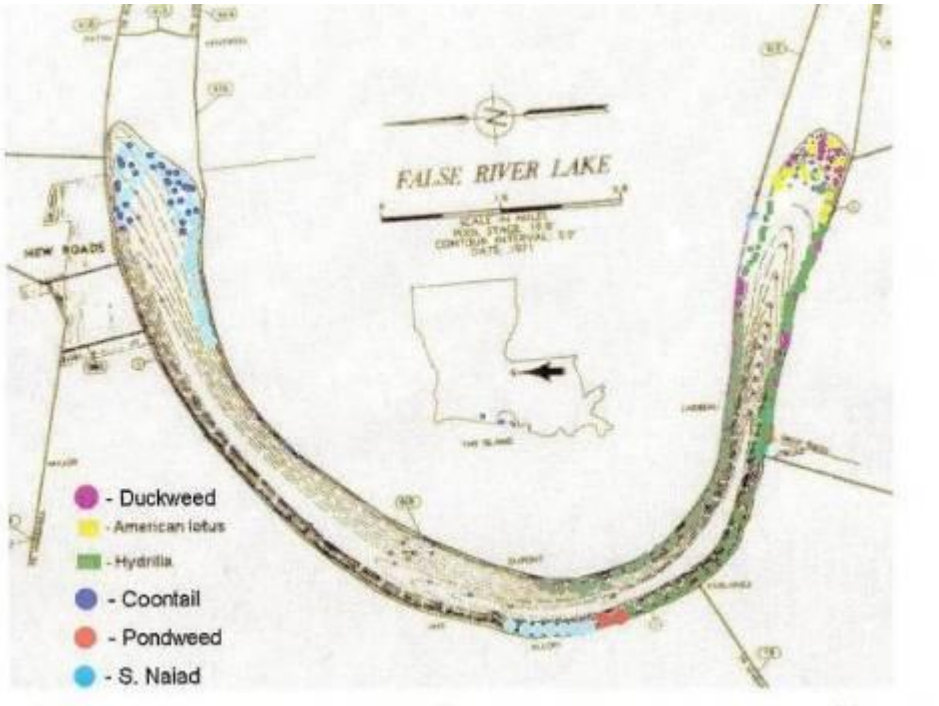
Two predominate species occur on the North end of the lake, southern naiad (*Najas guadalupensis (Spreng) Magnus*) and coontail (*Ceratophyllum demersum*). Two aquatic plant test plots using 4 species of native aquatic plants was done on the north end. Vallisneria, pondweed, water-grass and naiad were planted. This project was funded locally and contracted by the Corps of Engineers as a project designed to replace Hydrilla.

Sparsely dispersed floating mats as well as singular plants of water hyacinth were observed on the North end of the lake.

Since last year 5 separate Hydrilla treatments have occurred in False river Lake. In April 2000 on the Pecan Island (10 acres) shoreline and in June at the LA Express boat launch north to the end of the condominiums (5 acres) suing Sonar SRP. Additionally three areas (approx. 1.7 surface acres) were treated with Aquathol Super K; two on the hwy 1 side and 1 on the hwy 413 side. One application south of Bonaventures was done in April and the other two in July.

Average depth of the South flats area was 2.0 ft. Drought conditions continue throughout the region.

Surveyed by: Karl Mapes
Biologist Supervisor

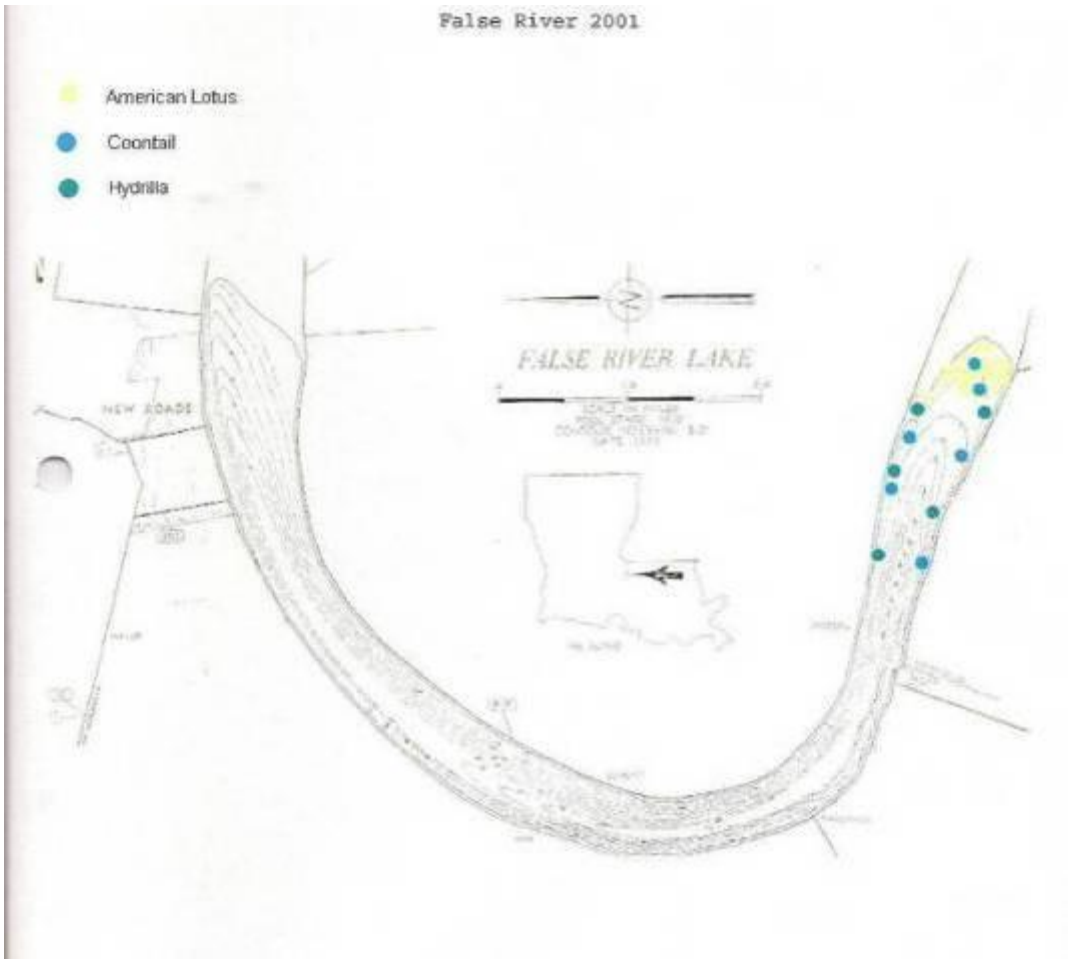


FALSE RIVER
2001

False River was type mapped on September 7, 2001 with less vegetation found this year compared with previous years. The large volume of rainfall during Allyson could have silted in those plants from the runoff. The dominant species of plant present was American lotus. In May of this year these lotus beds were treated with Aqua Kleen to allow camp owners access to the lake. Traces of hydrilla and coontail could be found on the southern end of the system.

Over 10 acres of False River's southern end hydrilla was treated in June of 2000 with Sonar SRP. Additionally another 5 acres was treated with Aquathol Super K.

Karl Mapes, Biologist Supervisor
Region III

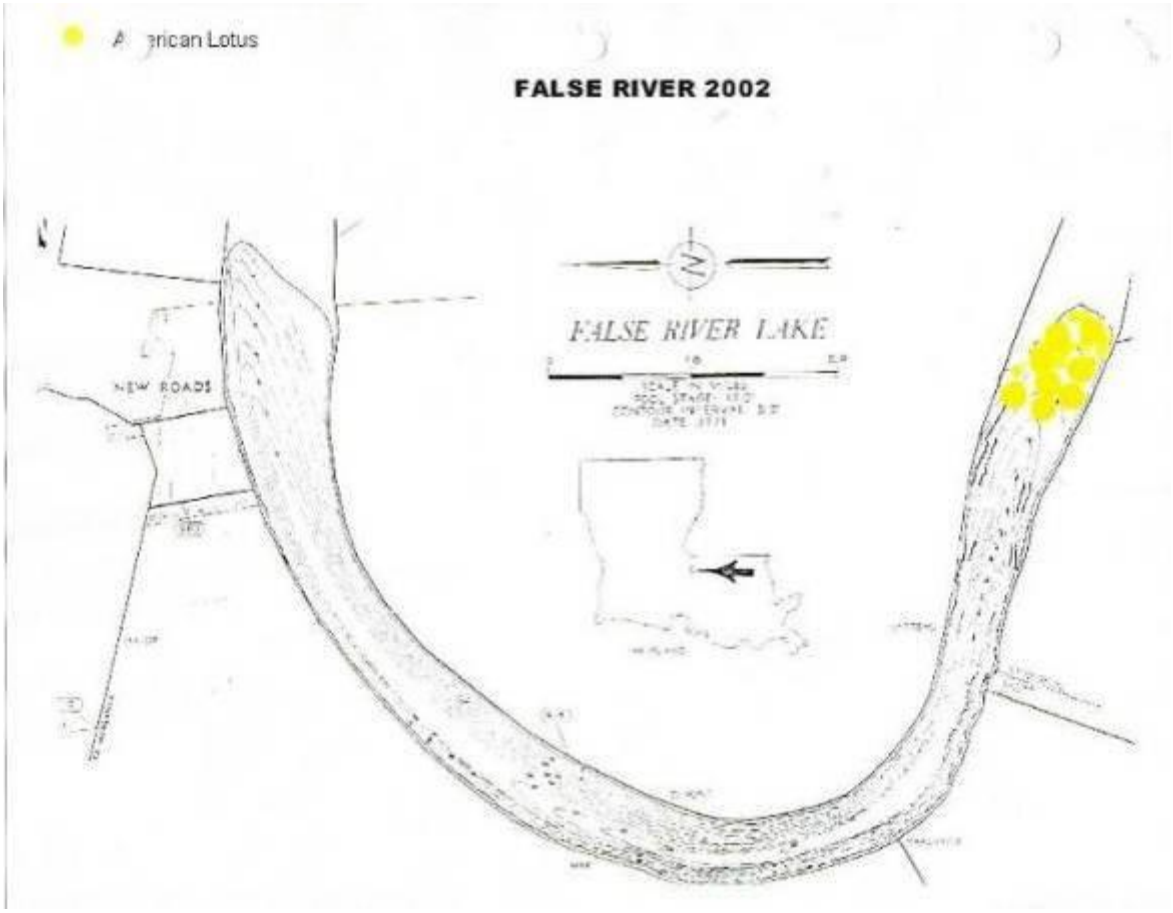


Type mapping of False River 2002

Farrell Lasseigne, Chris Chutz and I type mapped False River on 27 August 2002. Many changes had occurred since the last visit with the most notable being no hydrilla present. All those areas that had infestations were visited only to find no evidence of re-growth. Sparse finding of hyacinth and alligatorweed were the only other plants noticed and they were extremely few in number with only one site containing no greater than 10 hyacinth plants.

Average depth on the south end was 4.2 feet and the north end averaged 2.5 feet.

Karl Mapes
Biologist Supervisor, Region III

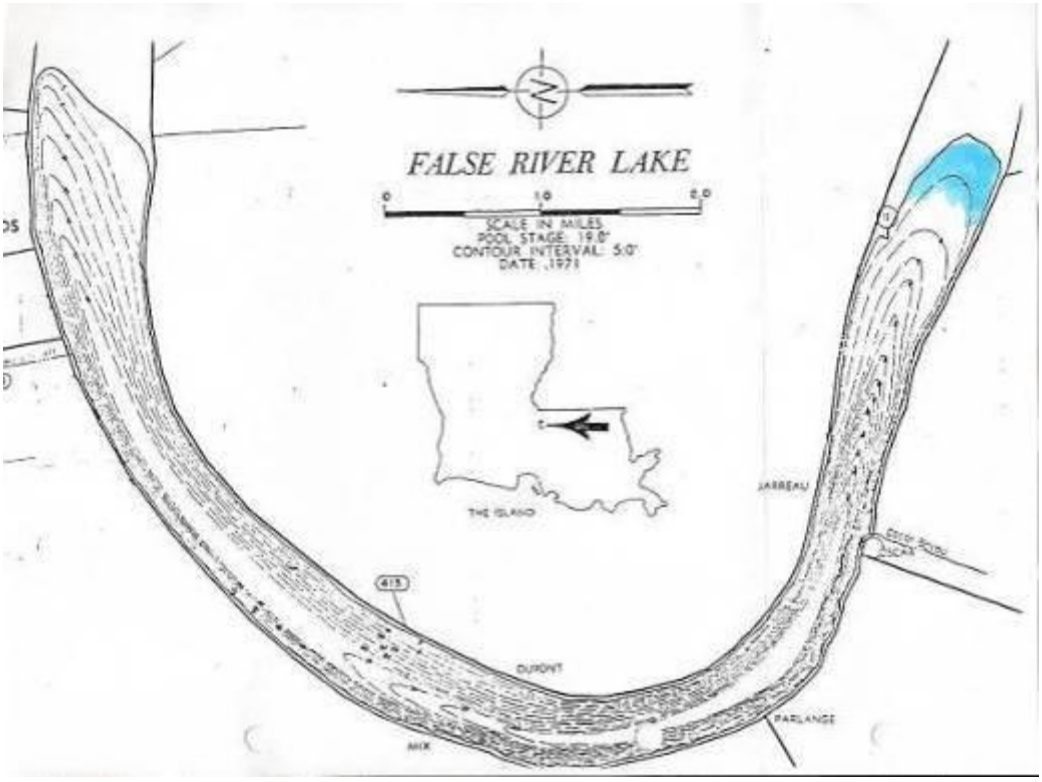


False River Type mapping 2003

On August 1, 2003 I surveyed False River to determine plant densities and composition. The most dominant plant species found is American lotus *Nelumbo lutea* and it was only found on the south end of the lake. No other plant species were found on the north end of the lake. None of the species planted by the contractor have survived this summer. There was no evidence of any growth.

Average depth on the north end of the lake was 3.0 ft. with the Secchi reading of 1.8 ft. and average depth on the south end was 4.8 ft. with a Secchi of 1.5 ft.

Karl Mapes
Biologist Supervisor, Region III

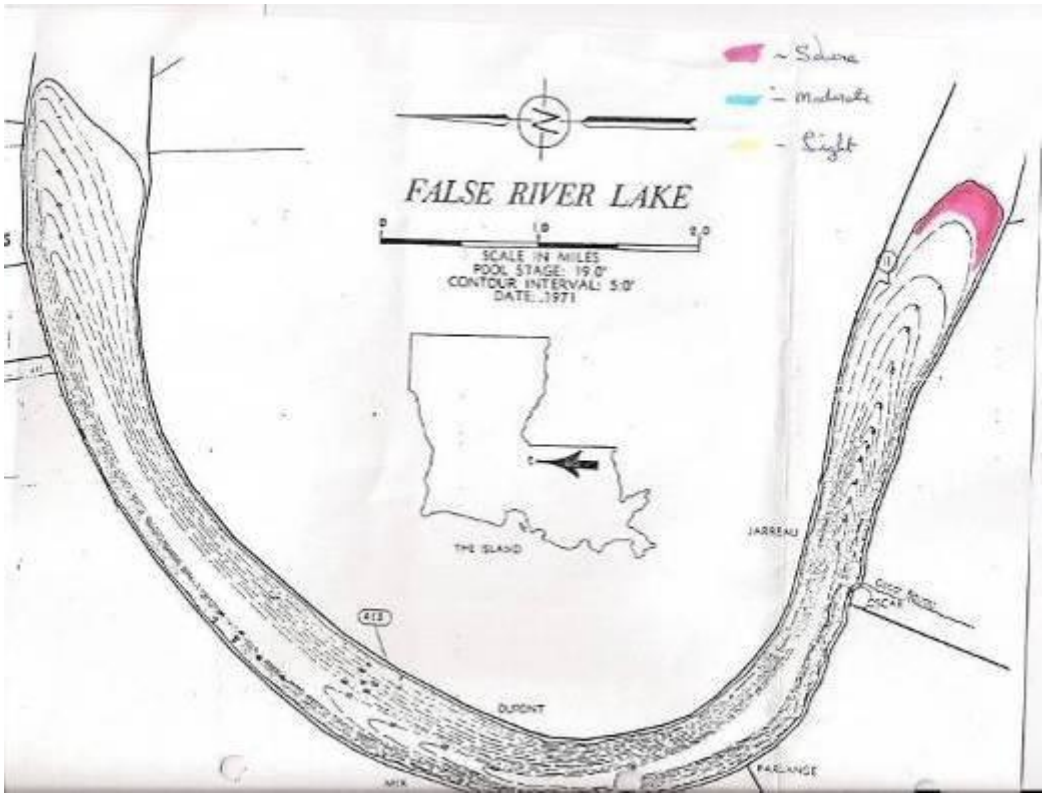


False River Type mapping 2004

On September 28, 2004 I surveyed False River to determine plant densities and composition. American lotus *Nelumbo lutea* is still the most dominant plant species found and is only located on the south end of the lake. Sparse outcroppings of water hyacinth *Eichhornia crassipes*, alligatorweed, *Alternanthera philoxeroides* and duckweed could be found. These plants were primarily located in the south end as well. No other plant species were found on the north end of the lake. None of those species planted by the contractor seemed to have survived. There was no evidence of any growth in any cage.

Average depth on the north end of the lake was 2.7 ft. and average depth on the south end was 4.1 ft.

Karl Mapes
Biologist Supervisor, Region III



False River Vegetation 2011

False River was surveyed on September 26, 2011 to determine aquatic plant abundance and species composition. There was a 15 acre stand of southern naiad (*Najas guadalupensis*) in the south flats. It occurred in water depths of 0ft-3ft. This was the predominant aquatic plant species in the lake. The north flats were void of any significant aquatic vegetation. Both the island side bank and the New Roads side bank were surveyed and also showed no signs of significant vegetation. Trace amounts of water hyacinth (*Eichhornia crassipes*), common salvinia (*Salvinia minima*), and duckweed (*Lemna spp*.) could be found throughout the lake along the banks. Bayou Chenal, Tee Bayou, False Bayou, and surrounding canals are all connected to False River. Each of these bayous and canals contained a healthy fringe of coontail (*Ceratophyllum demersum*). They were also infested heavily with water hyacinth (*Eichhornia crassipes*), common salvinia (*Salvinia minima*), and duckweed (*Lemna spp*.).

Jonathan Winslow
Inland Fish Biologist

2011 continued

2011 continued

Appendix B

LDWF Waterbody Management Plan Part VI-B

Waterbody Evaluation & Recommendations

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES DIVISION

PART VI -B

WATERBODY MANAGEMENT PLAN SERIES

FALSE RIVER

WATERBODY EVALUATION &
RECOMMENDATIONS

CHRONOLOGY

DOCUMENT SCHEDULED TO BE UPDATED ANNUALLY

July 2010 – Prepared by
Rachel Walley, Biologist Manager, District 7

November 2011 – updated by
Rachel Walley, Biologist Manager, District 7

Table of Contents

STRATEGY STATEMENT

Recreational
Largemouth bass are managed to provide the opportunity to catch fish of greater average size. Sunfish, catfish, and crappie are managed to provide a sustainable population while providing anglers the opportunity to catch or harvest numbers of fish.

Commercial
Commercial species of fish are managed to provide a sustainable population.

Species of Special Concern
Species of special concern are managed to ensure sustaining populations.

EXISTING HARVEST REGULATIONS

Recreational
Statewide regulations for all game fish species with the exception of largemouth bass.
Largemouth Bass – 14" minimum total length, 5 daily

Commercial
Statewide regulations for all commercial fish species except that the use of gill nets, trammel nets, and seines are prohibited.

Species of Special Concern
Paddlefish – Recreational take is 2 per person, all fish greater than 30" lower jaw fork length must be returned to the water unharmed.

SPECIES EVALUATION

Recreational – Largemouth Bass
There was an overall decline in annual stock-, quality- and preferred-size fish from 1989 to 2011, as indicated by the downward trend in spring electrofishing catch per unit effort (Figures 1 and 2). The indicated decline in relative abundance during 1991 might have resulted from the elevated water levels during that time. The rise in catch rate the following years may have resulted in a larger stock abundance and quality recruitment of young in 1992, 1993 and 1994. However, records of lake water levels during that period are not available. The hydrograph of the Mississippi River in 1991 (APPENDIX I – 1991 MISSISSIPPI HYDROGRAPH) is an indication of higher lake levels that year, because there is a subsurface hydrologic connection that exists between the river and the lake. There were also declines in catch rates during 1997 and 2001. These samples were probably negatively biased due to high water levels during spring of those years (APPENDIX II – LOG OF FALSE RIVER WATER LEVELS) (APPENDIX III – 2001 MISSISSIPPI HYDROGRAPH). Again, the declines in catch rate during these years were followed by years of increased relative abundance.

Due to the overall declining bass population, trophy lake status was rescinded in 1998. This decline followed the completion of the Bayou Grosse Tete Watershed Project in 1993 (APPENDIX IV – MAP OF BGT PROJECT AREA AFFECTING FALSE RIVER). The project

drained an additional 30,000 acres which consisted primarily of agriculture land into False River. The additional drainage lead to heavy sedimentation on the north and south ends of the lake. Consequently, this resulted in loss of spawning habitat and virtual elimination of submersed aquatic vegetation. Since 2000, total spring electrofishing catch rate has fluctuated widely between 26 and 154 bass per hour. Work done to reduce erosion in the M-1 canal in 2005 and clean out of the sediment trap in 2006 was followed by a rise in quality size fish. These higher numbers indicate that more habitats are available for successful spawns. Contrary to other fish populations in the region, the fish populations of False River did not suffer from hypoxia-induced fish kills following Hurricanes Katrina and Gustav in 2005 and 2008, respectively.

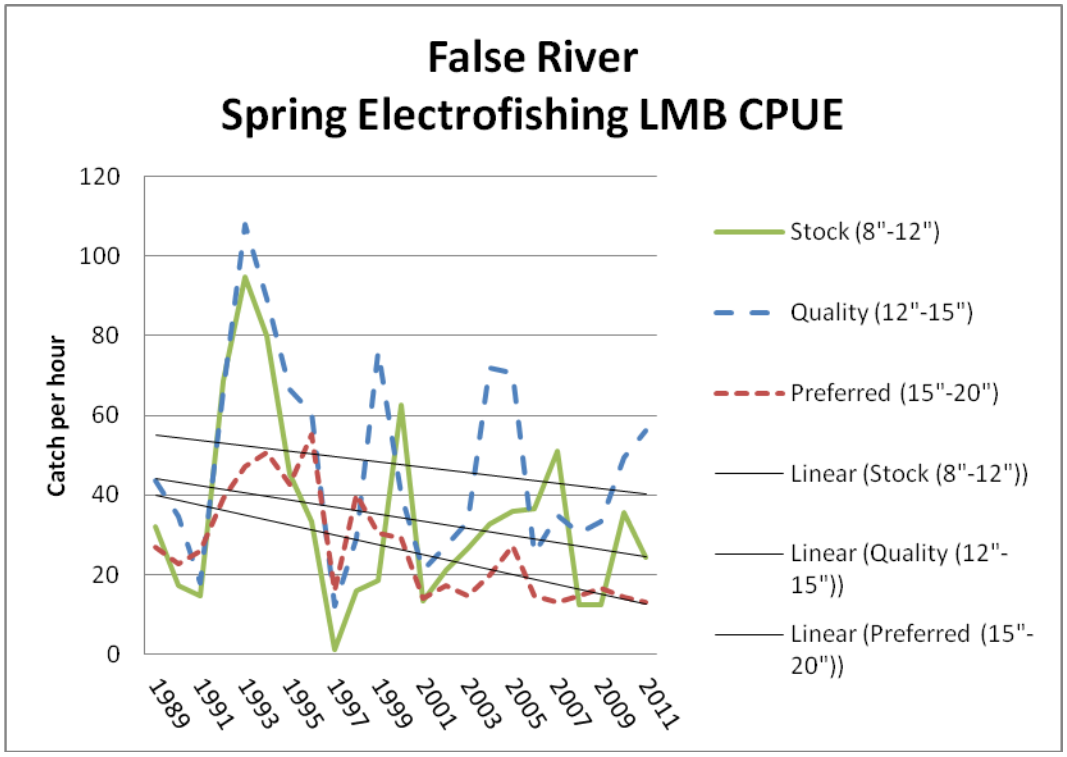


Figure 1. Spring catch-per-unit-effort (CPUE) values for largemouth bass on False River from 1989 to 2011. The results show an overall decline in electrofishing CPUE since standardized sampling began until 2005. CPUE values for quality size fish show an increase after 2005.

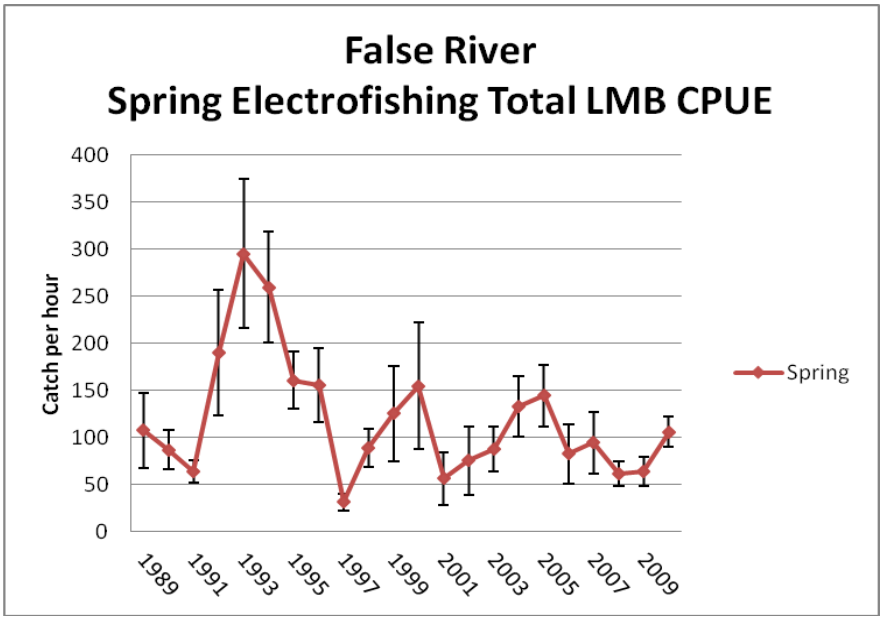


Figure 2. Spring catch-per-unit-effort (CPUE) values for largemouth bass on False River from 1989 to 2010. Error bars represent 95% confidence limits of the mean CPUE.

Aside from the sharp decline in 1993, relative weight of largemouth bass appears stable (Figure3). The 1993 decline is marked by the completion of the Bayou Grosse Tete Watershed Project. The construction phase of the project produced turbid conditions that negatively affected bass relative weights. Since project completion, the relative weights have improved and may be attributed to the rise in shad abundance since project completion (Figure 8).

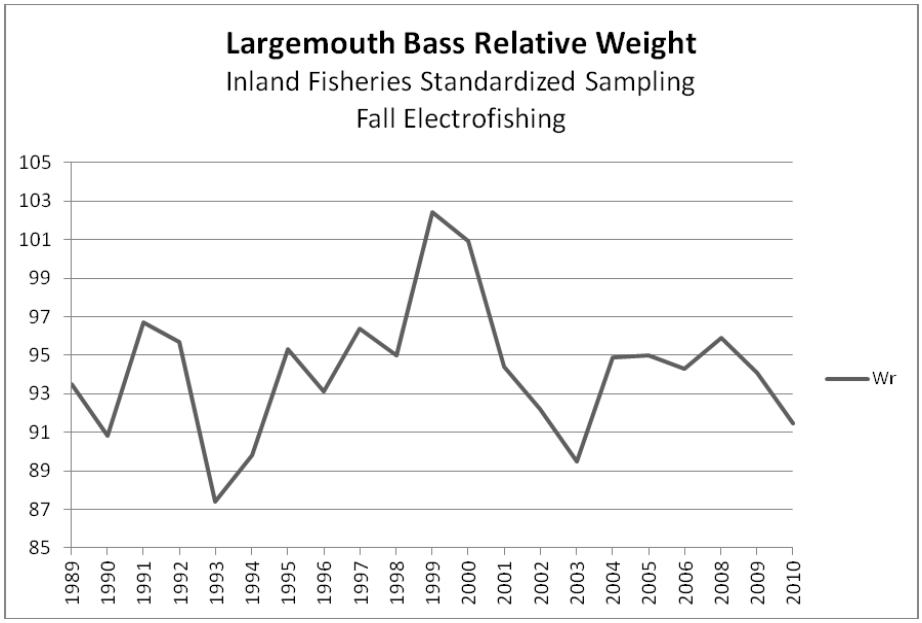


Figure3. Relative weights for largemouth bass fall electrofishing samples for False River from 1989 to 2010. Relative weights appear stable except for a decline in 1993. The decline coincides with the completion of the Bayou Grosse Tete Watershed Project.

Largemouth bass proportional stock densities (PSD) are relatively stable, even though the trend line shows a slight increase from 1989 to 2011 (Figure 4). Also, changes in relative stock density (RSD) indicate that the proportion of preferred-size fish is declining.

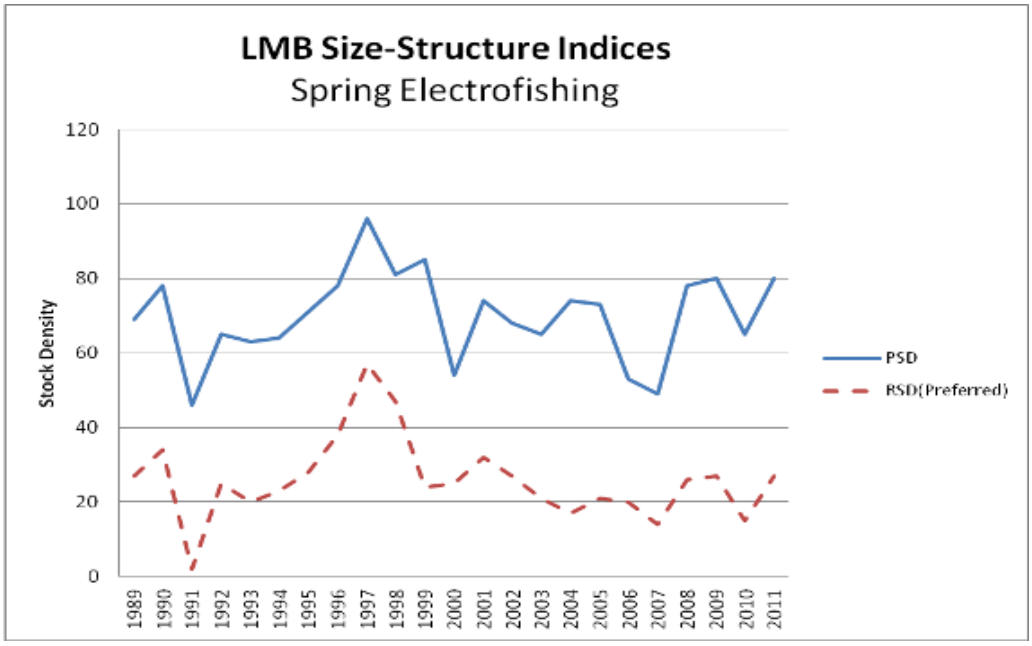


Figure 4. Largemouth bass size-structure indices on False River from 1989 to 2011 spring electrofishing samples. The trend lines indicate that there is a decrease in the proportion of preferred fish, and also an increase in the proportion of stock fish over time.

Genetics –

Table 1. Largemouth bass stocking records and genetic analyses for False River, LA from 1984 – 2011.

YEAR	SIZE	FLMB STOCKED	GENETIC SAMPLING RESULTS				
			N	% NLMB	% FLMB	% HYBRID	TOTAL FLORIDA INFLUENCE
1984	Fingerlings	150,000					
1989	Fingerlings	32,000					
1990	Fingerlings	301,193	15	100	0	0	0
	Phase II	1,733					
1991	Fingerlings	211,000	8	75	0	25	25
1992			39	61	18	21	39
1993	Fingerlings	241,557					
1994	Fingerlings	83,667	36	67	25	8	33
	Phase II	156,875					
1995	Fingerlings	4,500	39	62	18	20	38
	Fry	312,550					
1996	Fingerlings	23,854	29	59	7	34	41
1997	Fingerlings	125,145	39	52	15	33	48
1998			50	56	16	28	44
1999	Fingerlings	33,506	30	73	3	24	27
2000	Fingerlings	40,440	30	53	13	34	47
2001	Fingerlings	34,832	28	68	7	25	32
2002	Fingerlings	31,988	35	60	6	34	40
2003	Fingerlings	32,242					
2004	Fingerlings	32,067	30	60	13	27	40
2005	Fingerlings	30,911					
2007			40	68	10	22	32
2008	Fingerlings	32,554					
2009			52	67	4	29	33
2010	Fingerlings	2,520	139	64	5	31	36
2011	Phase II	600	130	68	9	22	31

Florida largemouth bass have been stocked into False River, Louisiana regularly since 1984 (Table 1). Genetic sampling indicates that 30% to 40 % of the bass population is comprised of the Florida-strain. This percentage exceeds the minimum 20% expectation of the management objective to provide the opportunity to catch fish of greater average size. Establishment of the Florida-strain was a success due to the intense and frequent stocking; nearly two million Florida largemouth bass have been introduced into the lake. Also, False River is a fairly closed system which limits the emigration of stocked fish.

Creel –

Table 2. Largemouth bass angler effort and catch rates for False River, LA, for the years 1989 – 1992.

Year	Mean angler hours/trip	LMB caught/hour	% LMB released
1989	4.8	0.22	41
1990	4.8	0.30	41
1991	3.5	0.29	56
1992	3.9	0.38	74
Average	4.3	0.30	53

Creel data for 1989, 1990, 1991 and 1992 is presented in Table 2. Through the period largemouth bass anglers spent an average 4.3 hours fishing per trip and caught an average 0.3 bass per hour. Hours fishing per trip were reduced and the percentage of released bass increased during 1991 and 1992 when a 15"-19" protected slot limit was in effect.

Creel data for bass anglers in 2006 and 2010 indicates an average release rate of 89.5%. A significant proportion of those bass were smaller than 14 inches (Table 3). Angler catch rate was increased during the 2006 and 2010 surveys due to an increased presence of bass smaller than 14 inches.

Table 3. Largemouth bass angler effort, catch and release rates for False River, LA for 2006 and 2010.

Year	Mean angler hours/trip	LMB caught/hour	% LMB released	% LMB released <14"
2006	3.7	0.46	96	70
2010	3.7	0.89	83	76
Average	3.7	0.67	89.5	73

Recreational – Other Fish Species

In Figures 5 and 6 below the pounds per acre of sunfish (redear and bluegill) are shown prior to, and after, the completion of the Bayou Grosse Tete Watershed project. The sunfish population has been in decline since the construction of the Bayou Grosse Tete Watershed Project in the late 1980's. The decline is attributed to the loss of available habitat for sunfish. The project silted over the shell beds that served as spawning habitat for the fish.

Rotenone is no longer used to sample fish in False River. Lead net and hoop net sampling stations will be established to monitor sunfish, crappie and catfish.

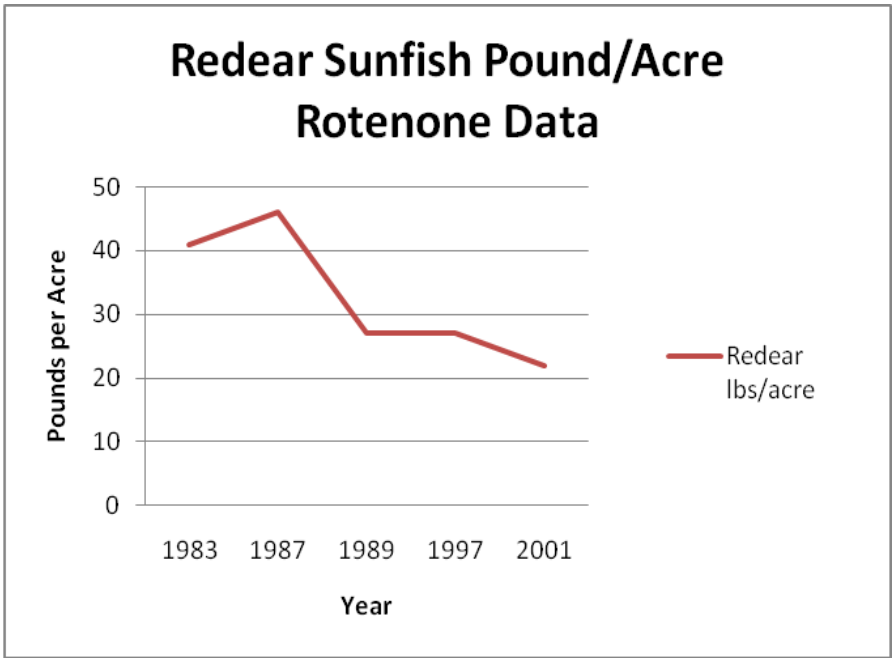


Figure 5. Redear sunfish standing crop estimates from rotenone catches on False River, Louisiana from 1983 – 2001.

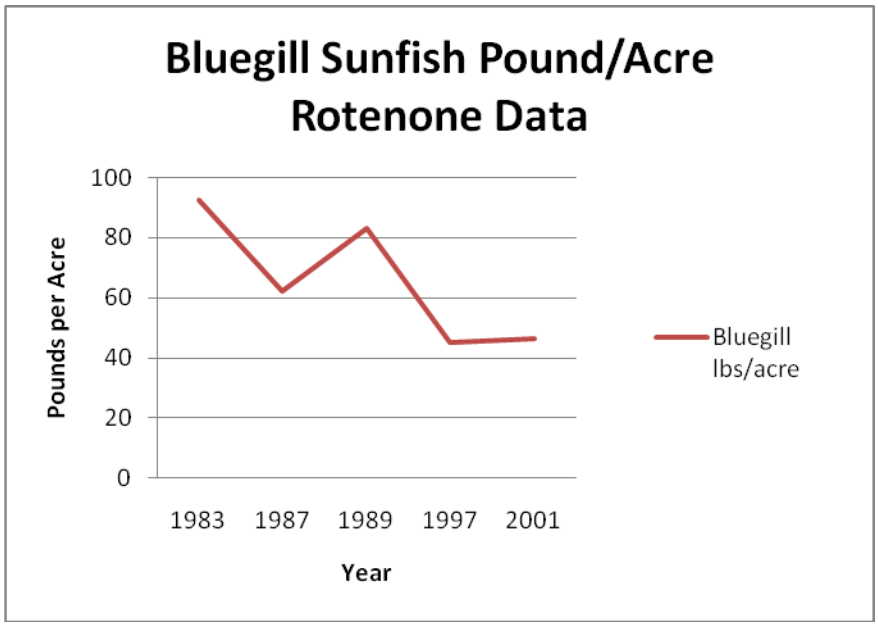


Figure 6. Standing crop estimates from rotenone catches for bluegill sunfish on False River, LA from 1983 – 2001.

Figure 7 below shows channel catfish pounds per acre prior to and after the commercial net ban in 1991. The regulation prohibited the use of gill nets, trammel nets, and seines for False River.

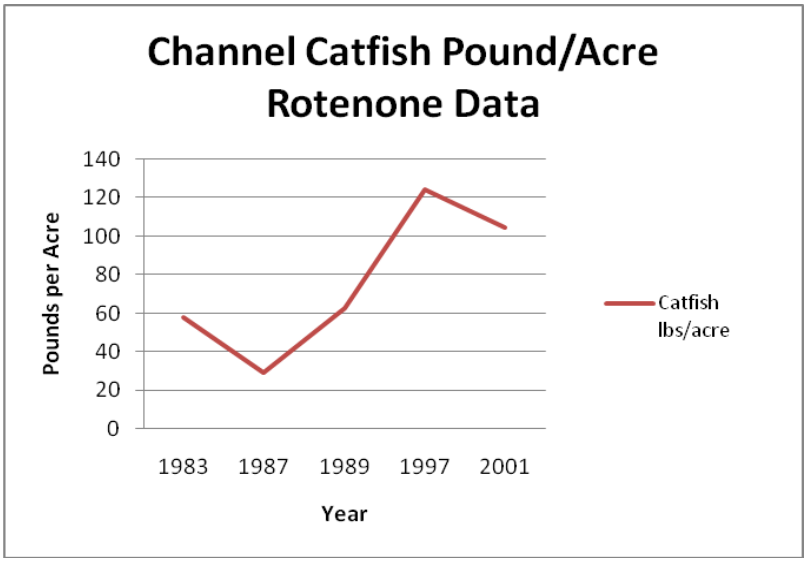


Figure 7. Channel catfish standing crop estimates from rotenone catches on False River, Louisiana, 1983 – 2001. The population has increased since the commercial net ban in 1991.

Forage

Forage is comprised mainly of gizzard shad and threadfin shad, as well as sunfish species. An average of three 1-acre rotenone biomass samples per year is shown below (Table 4), and indicates that forage was not a limiting factor in largemouth bass production. The data suggests that the total pounds-per-acre of available forage did not change drastically during that time period. However, following the completion of the Bayou Grosse Tete Watershed Project, there was a shift in species composition from primarily sunfishes to mostly shad. This shift was due to the loss of hard bottoms for the nesting sunfish species, predominantly bluegill and redear sunfish.

Table 4. Pounds of available forage fishes derived from standing crop estimates in rotenone catches from False River, LA, for the time period of 1983 to 2001.

Year	Total lbs./acre-forage
1983	301.5
1987	223
1989	216.2
1997	243.2
2001	273.4

Currently, forage species estimates are not able to be determined due to insufficient data. However, relative weights of largemouth bass indicate that there is sufficient forage available. Largemouth bass relative weights from 2001 to 2010 show a slight overall increase over the last

ten years (Figure 8). Relative weights during this ten year period average 93.52. The slight increase coincides with renovations that were made to the M-1 canal in 2005.

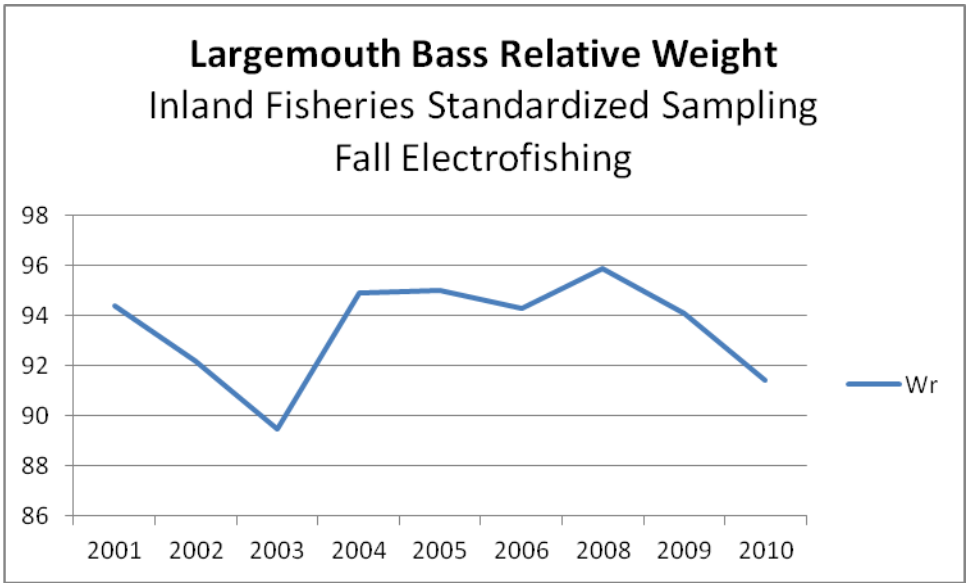


Figure 8. Relative weights for largemouth bass fall electrofishing samples for False River, LA, from 2001 to 2010. Relative weights were stable to slightly increasing.

The first phase of the Bayou Grosse Tete Watershed Project was completed in 1989. At this point in time, the nesting sunfishes started to decline while the shad population increased (Figure 9). The shift in population is likely due to the increased siltation and turbidity resulting from the project. Current estimates of sunfishes and shad from existing electrofishing forage data cannot be determined. Revisions to current sampling procedures are needed to assess these fishes.

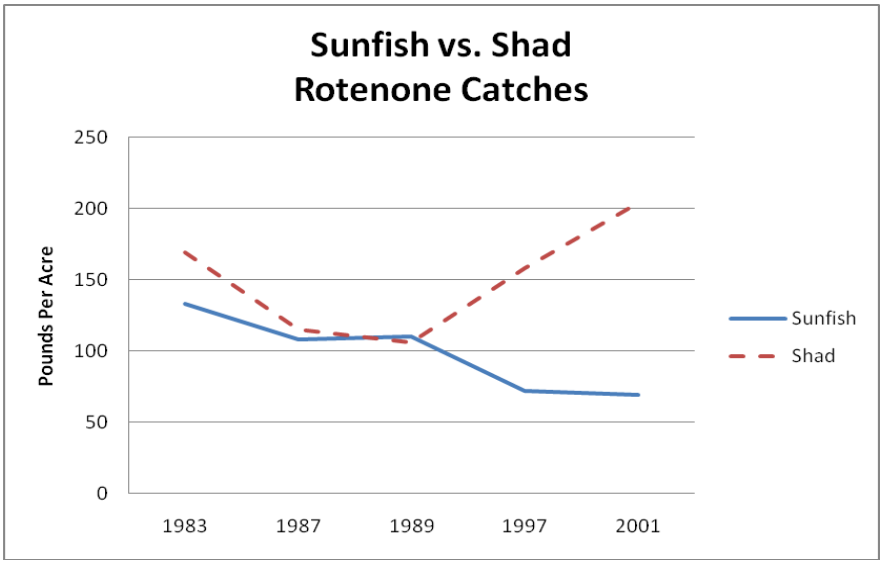


Figure 9. Sunfish (predominantly bluegill and redear sunfish) and shad standing crop estimates in rotenone catches on False River, Louisiana from 1983 - 2001. The trend lines indicate that there was a shift from nesting sunfish to shad following construction of the Bayou Grosse Tete Watershed Project.

Commercial

The use of gillnets, trammel nets, and seines have been prohibited since 1991. The ban was initiated to manage for trophy bass. The trophy status was rescinded on False River in 1998, but the netting ban has not been lifted. Since the ban, there have been increases in rough fish as indicated from standardized fishery-independent gillnet sampling (Figure 10).

Due to habitat degradation that has occurred over the years and the increase in rough fish, particularly carp species, there is a need for control of these invasive fish populations.

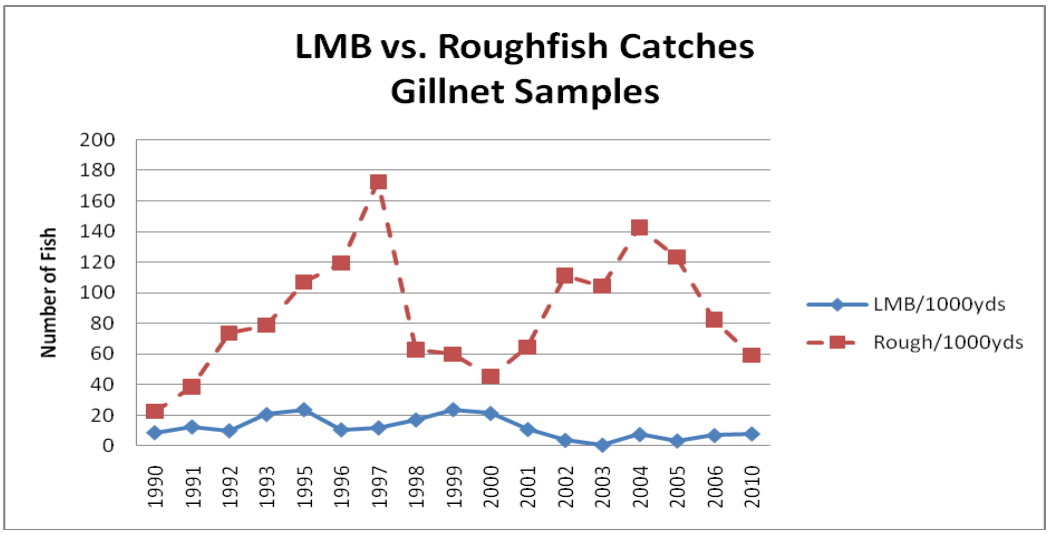


Figure 10. Gillnet catch-per-unit-of-effort (CPUE) show that the catches of rough fish on False River, Louisiana have increased over time (1990 – 2010), while the catches of largemouth bass have slightly decreased.

Species of Special Concern

Paddlefish are present in False River. The last recorded capture was from 2005 LDWF gillnet sampling. A paddlefish was observed in a 2009 gillnet sample, but the fish escaped before being brought into the boat for data capture.

Aquatic Invasive Species

Asian carp (i.e., common carp) are present in False River. Gillnet data depicted in Figure 11 has shown an increase in carp catches, especially since 2000. This is probably due to the increase of soft sediments and the commercial netting ban.

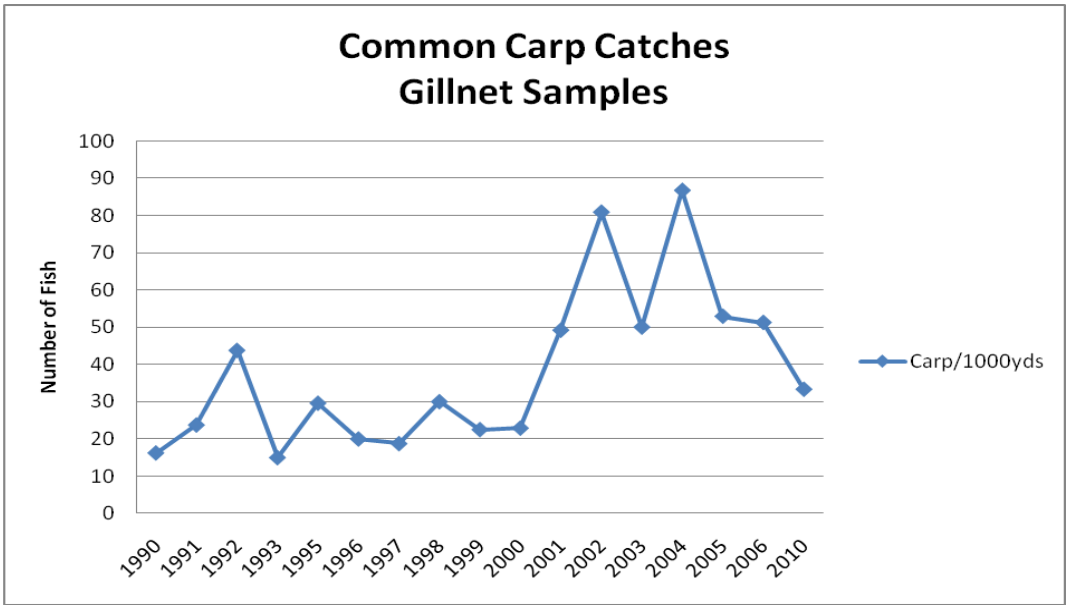


Figure 11. Common carp CPUE from gillnet samples on False River, Louisiana from 1990 to 2010. The results show an increase over time, especially since the net ban in 1998 to protect largemouth bass.

Table 5. Individual species statistics by pounds caught per 100 feet of gill net per night from False River, LA, for the time period of 1999 to 2010.

Species	1999	2000	2002	2003	2004	2005	2006	2010
Largemouth Bass	4.62	5.89	0.41	0.55	0.76	1.31	1.34	2.02
White Bass	0.49	1.68		0.22	0.96	0.30		
Striped Bass				5.11				1.96
Hybrid Striped Bass		0.16	1.03	6.61				
White Crappie	0.10	0.04		0.03				
Black Crappie		0.04		0.04	0.02	0.04	0.34	0.05
Redear Sunfish	0.01	0.03						
Common Carp	11.33	15.22	12.96	27.34	27.08	19.29	23.81	17.62
Grass Carp							0.36	0.55
Bigmouth Buffalo	1.02	3.74					2.51	
Smallmouth Buffalo	14.35	8.54	6.81	26.43	21.88	23.23	25.18	13.20
Freshwater Drum	0.53	1.63	0.40	2.53	0.38	0.06	0.34	0.66
Channel Catfish	0.14	0.81	0.09	0.04	0.13	0.31	0.07	0.05
Blue Catfish		0.84		0.49	0.33	0.90	1.40	
Flathead Catfish	1.37	0.99			0.20	0.37	0.64	0.86
Bowfin	1.48	0.42	0.91	0.15	0.45		0.42	0.94
Spotted Gar	0.33	0.47		0.48			0.37	0.21
Gizzard Shad	0.36	0.62		0.44	0.04	0.01	0.20	0.79
Striped Mullet	0.08	5.83			1.50		2.29	
Paddle Fish		3.42	1.26				5.19	

Gill net data for 1999, 2000, 2002, 2003, 2004, 2005, 2006 and 2010 presented in Table 5 show that common carp and smallmouth buffalo produce more pounds per 100 feet of gill net than any other species in False River.

The presence of grass carp has been documented since the late 1980's. The introduction of the invasive fish has not been authorized by the department. It has yet to be determined if the fish are diploid or triploid. Due to the reproductive biology of grass carp, the carp may spawn but subsequent egg development will be unsuccessful due to the lack of current in False River. It is speculated that the presence of the herbivorous fish is contributing to the loss of aquatic vegetation. Capture records of grass carp in the lake are as follows:

May 1989 – A grass carp weighing approximately 52 pounds is captured near the Lighthouse Canal.
February 1991 – During routine gillnet sampling, a grass carp is netted in the south end of the lake. The fish escapes capture by tearing the net.
December 2005 – During routine gillnet sampling, a grass carp is netted in the north end of the lake.
January 2010 – During routine gillnet sampling, two grass carp are netted. One in the south end and one near the Lighthouse Canal.

HABITAT EVALUATION

Watershed

False River's watershed is comprised of 34,453 acres of mostly agricultural pasture-land in the interior of the island and mixed woodlands and pasture-land northeast of New Roads. Peak crop production was reached in the 1980's, with approximately 75% of the island under agricultural use. Currently, the total watershed area consists of 2,300 acres cropland, 1,700 acres residential/commercial, 27,353 acres of pasture and woodland, and the remaining acreage is the surface area of the lake. There are two main drainages in the watershed that flow into the lake. Patin Dyke on the north end drains 25% of the watershed, while Discharge Bayou (M-1 canal) on the south end drains the remaining 75%. The Natural Resource Conservation Service (NRCS) installed sediment traps in both of the discharge canals. NRCS also fenced many of the canals in pastureland areas to reduce bank erosion. Efforts to decrease the amount of sediment discharging into False River, although difficult to quantify, are evident. Since bank stabilization efforts and maintenance of sediment traps, sediment traps are collecting far less material, and largemouth bass stocks have increased and native vegetation is starting to establish in the south flats.

Aquatic Vegetation

In the 1980's, prior to completion of the Bayou Grosse Tete Watershed Project, there were dense stands of submersed aquatic vegetation on both the north and south flats of False River. There was also a fringe of submersed vegetation along the shoreline as well as a small stand of lotus near the south flat. By 1990, after completion of the first phase of the Project, the north flat became void of vegetation. The lake's vegetation was in steep decline for the next couple of years except for the lotus stand. Upon completion of the project, most of the lake had become void of vegetation except for some floating plants and the expanding stand of lotus. In 1993, hydrilla first appeared in the lake. Hydrilla heavily infested the shoreline on the Island side from mid-lake to the south flat and on the LA 1 side from the south flats to 1.5 miles north near the Bonaventure landing. In 1997, aquatic vegetation was again in steep decline. By September 2001, large amounts of rainfall from Tropical Storm Allison increased the sediment load into the lake. The resulting siltation was followed by declines to the point that there was no evidence of hydrilla in 2002.

The Lewisville Aquatic Ecosystem Research Facility was funded by the parish to attempt to establish submersed native vegetation in 2000. It was reported in a vegetation survey by LDWF in 2003 that there was no survival of introduced vegetation, even in the enclosures that protected the plants from herbivory.

Currently there is less than 5% coverage of aquatic vegetation on the lake. There was a stand of lotus on the south flats of at least 40 acres annually. The lotus was most likely able to survive the conditions of the lake due to its ability to grow to the surface for sunlight and its substantial root system. Since 2009, lotus is no longer present in the lake.

The Louisiana Department of Agriculture and Forestry (LDAF) tested lake water for traces of atrizine in May of 1997. Results showed that atrizine levels in the lake were less than 1ppb. This low level of herbicides from agricultural runoff would not have contributed to the disappearance of lake vegetation. LDAF will contribute such vegetation loss at levels between 30 – 40 ppb.

Soil samples were collected from the littoral zones of the lake in January 2010. Analysis of sample nutrients and alkalinity suggest that soil conditions are suitable for plant growth. However, the instability of the soil and the continuous input of silt are not conducive to re-establishment of vegetation.

A survey of the lake in 2011 found that there is a 15 acre stand of southern naiad located in the south flats. This marks the first evidence of submerged aquatic vegetation, besides lotus, in the lake since 2001. The establishment of southern naiad is evidence that lake conditions may now be more conducive to vegetation establishment. These improvements are since the work in the M-1 canal in 2005, and the 2010 work done in the Patin Dyke canal on the north end of the lake.

Substrate

Sedimentation, particularly on the north and south ends, has minimized spawning habitat for nesting fish. Old shell beds that once served as excellent substrate for redear sunfish spawning have been silted over since the completion of the Bayou Grosse Tete Project (Figure 5).

During the carp spawning season, residents along the lake complain that thousands of fish root around in the loose sediments muddying the water. These fish are also contributing to the loose sediment issues. Average depth of the flats is less than 5 feet and the loose sediments are easily stirred by boat traffic and wave action. Soil samples collected in January of 2010 showed that the flats' substrate is high in organic matter in relation to the rest of the lake's littoral zone.

Artificial Structure

There is currently a lack of complex cover in False River. The deficiency is primarily due to the lack of submersed vegetation. A range of 15-30% areal coverage of complex cover is considered optimal for sportfish habitat. False River currently supports no more than 5% total aquatic plant coverage. Complex cover in False River is entirely limited to man-made structures, including piers and structures placed in the lake by anglers. In an effort to increase future angler success rate, the addition of artificial complex cover will be considered.

Water Level Fluctuation

Waters associated with the Mississippi River are very productive due in part to water fluctuation. A typical hydrograph will show high water periods in the spring and low water periods in the fall. The annual pattern contributes to productivity in ways that include the following:

- High spring water coincides with most sport fish spawning periods and covers areas that stay dry throughout most of the year. The newly flooded substrate is ideal spawning substrate for nesting sport fish. Flooded terrestrial vegetation provides protection for newly hatched fish. Without exception, increased sport fish recruitment is linked to timely high water of sufficient duration. Low water levels in the fall expose bottom sediments to the sun and atmosphere. In addition to beneficial soil compaction, a drying period reduces organic material that could otherwise negatively impact spawning success.

- The development of the False River shoreline is associated with demands to control water fluctuation and maintain a stable water level to the extent possible. The resulting user group conflict has been the source of considerable acrimony for an extended period of time. Currently the Pointe Coupee Police Jury makes efforts to accommodate its constituents and manipulates the False River water level toward a stable level. Flood control is conducted to the extent possible. The False River Civic Association has recommended that the lake be lowered at a rate of 6 inches per day to 13' MSL if a six

inch rain is forecasted within a 6 to 10 day period. Recommendations for low water periods are met with strong opposition as well and have been successfully prevented to date.

Stratification

Annual stratification is a condition common to aquatic ecosystems without water flow. During the warm months of the year, layers of water form due the effects of sunlight. The upper layer (epilimnion) is warmer and less dense. Depth of the epilimnion is directly related to water clarity. In clear water, sunlight penetrates deeper than in turbid water. Because sunlight is a requirement for oxygen production through photosynthesis, the epilimnion is the region of highest dissolved oxygen. Water below the epilimnion receives little sunlight, is colder, and is more dense. This layer (the hypolimnion) has no incoming oxygen and typically has very low dissolved oxygen. False River stratifies annually and develops an epilimnion to approximately 5-6 feet below the water surface. Because average depth of False River is 21 feet, aquatic life that requires oxygen is limited to the relatively small portion of the waterbody during the warm months of the year.

Productivity of False River would be directly related to an increase in suitable habitat. With regard to water quality, an increase in suitable habitat can occur by conditions that include the following:

- Increased water clarity will allow sunlight to penetrate into deeper water, provide for photosynthesis, and increased dissolved oxygen.

- Mixing of water layers to allow movement of good quality water into greater depths. While rapid large scale mixing of False River can result in poor net water quality, a controlled mixing through deep aeration could increase available habitat. Air, released at depth rises to the surface and also pushes cooler water toward the surface. The process would create a mixing effect to stratified water. The action would also provide oxygenated water to greater depth.

CONDITION IMBALANCE / PROBLEM

1. The Grosse Tete Watershed Project. Resulting sedimentation has caused significant loss of aquatic vegetation and spawning habitat for nesting sportfish species, including largemouth bass and sunfish.

2. Shoreline development and siltation has greatly reduced the available complex cover for fish and other aquatic life.

3. Control measures to stabilize water level fluctuation are reducing associated benefits to aquatic habitat and fisheries resources. Shoreline residents comprise an active and vocal constituency of the Point Coupee Police Jury. Opposition to water levels above or below the 16' MSL pool stage is strongly expressed. Reasons cited include inconvenience, loss of aesthetic quality, and potential damage to shoreline structures.

4. Rough fish species including common carp and grass carp are causing damage to aquatic habitat. Commercial gill netting was prohibited in 1991 in conjunction with trophy largemouth bass management.

5. Stratification of water quality in False River limits the area of suitable habitat available.

CORRECTIVE ACTION NEEDED

1. Water fluctuation to the extent possible to mimic a natural hydrograph will provide benefit to the aquatic habitat and fish population.

2. Additional complex cover and native aquatic vegetation need to be established. This would include artificial reef structures and the planting of native aquatic vegetation.

3. Harvest of rough fish is necessary to minimize associated damage to aquatic habitat. A controlled commercial season is needed to allow harvest of rough fish and minimize conflict with other user groups.

4. Revise agricultural practices to reduce sedimentation. Including the maintenance of existing sediment trap and bank stabilization in the watershed.

ACTION PLAN

1. Determine current conditions of lake siltation and turbidity. Work with Police Jury, DNR, NRCS, DEQ and USACE to secure funds for projects to address these problems.

2. Continue standardized sampling of fish populations to evaluate the condition of the stock and evaluate nesting species success. This includes a three year age and growth study of largemouth bass. Study will be completed spring 2012. Results of study will allow for informed consideration of harvest regulation.

3. Mimic historic natural water fluctuation to the extent possible. Develop a plan to ensure that the water level manipulations do not interfere with spawning success. Basic guidelines would focus on timing of water reductions that coincide with fish spawning and the rate at which the lake is dewatered.

4. Siltation from runoff must be addressed in the False River watershed. Routine cleaning of silt trap and continued improvements to reduce erosion should be implemented. This may include the impoundment of water upstream from the lake to allow for the settling of suspended materials before runoff water enters the lake. Establishment of water quality monitoring stations throughout the lake should be implemented. These stations would include turbidity monitoring to measure the suspended and dissolved solids in the lake.

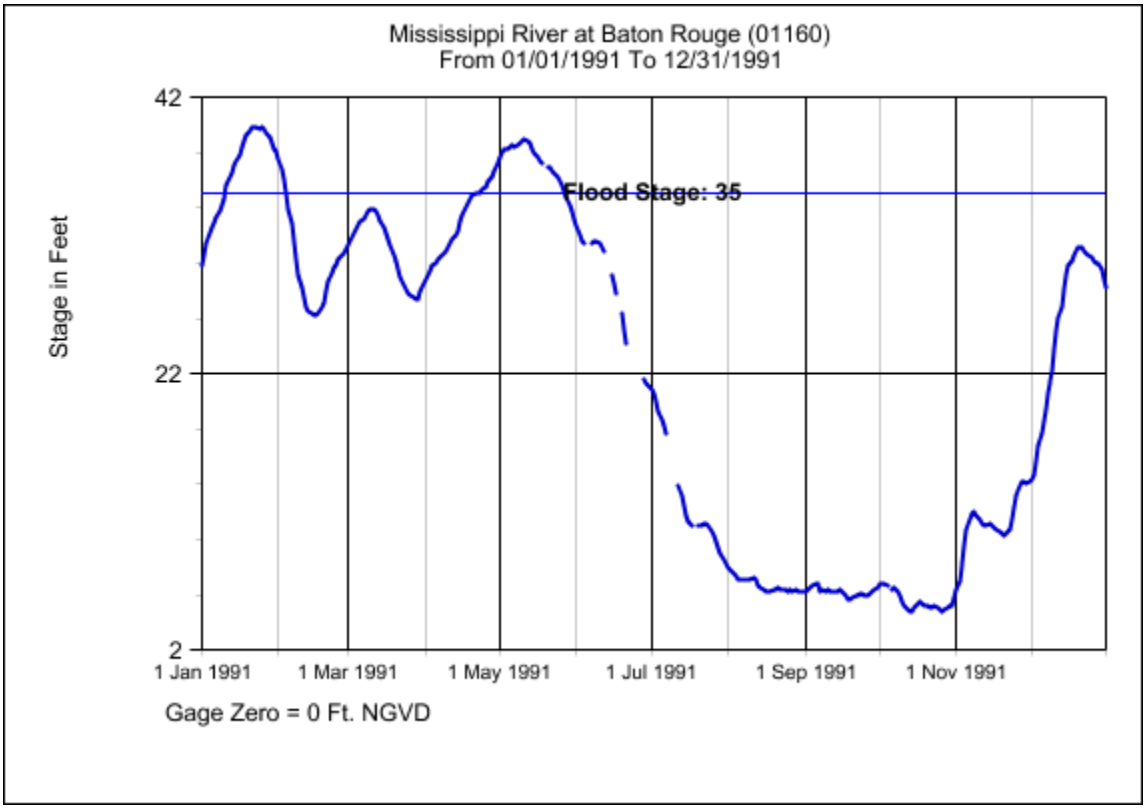
5. Develop and implement an artificial reef project. The addition of complex cover will increase angler success. Work with local sponsors to secure funds, materials and labor (APPENDIX VI – Artificial Reef and Native Aquatic Vegetation Plan).

6. Monitor grass carp populations in the lake. Work with USGS to determine ploidy of the population. It is also planned to investigate other potential herbivores in the lake.

7. Lift the commercial gill netting ban and implement a special season from November 1 to the end of February each year. Minimum mesh size for commercial gill nets and trammel nets set at 3.5".

8. Develop a protocol for a limnological survey of the lake. This work will be in conjunction with Louisiana State University.

APPENDIX I – 1991 MISSISSIPPI HYDROGRAPH



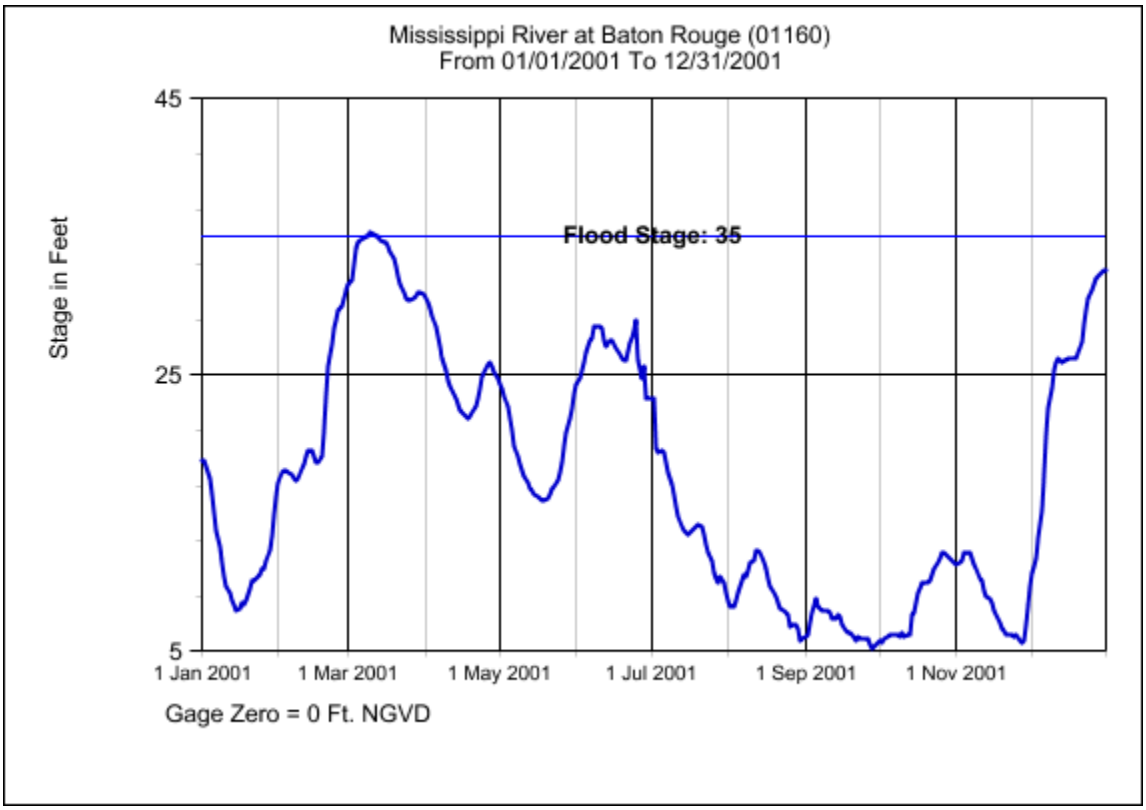
APPENDIX II – LOG OF FALSE RIVER WATER LEVELS

DAILY LOG OF FALSE RIVER'S LEVEL

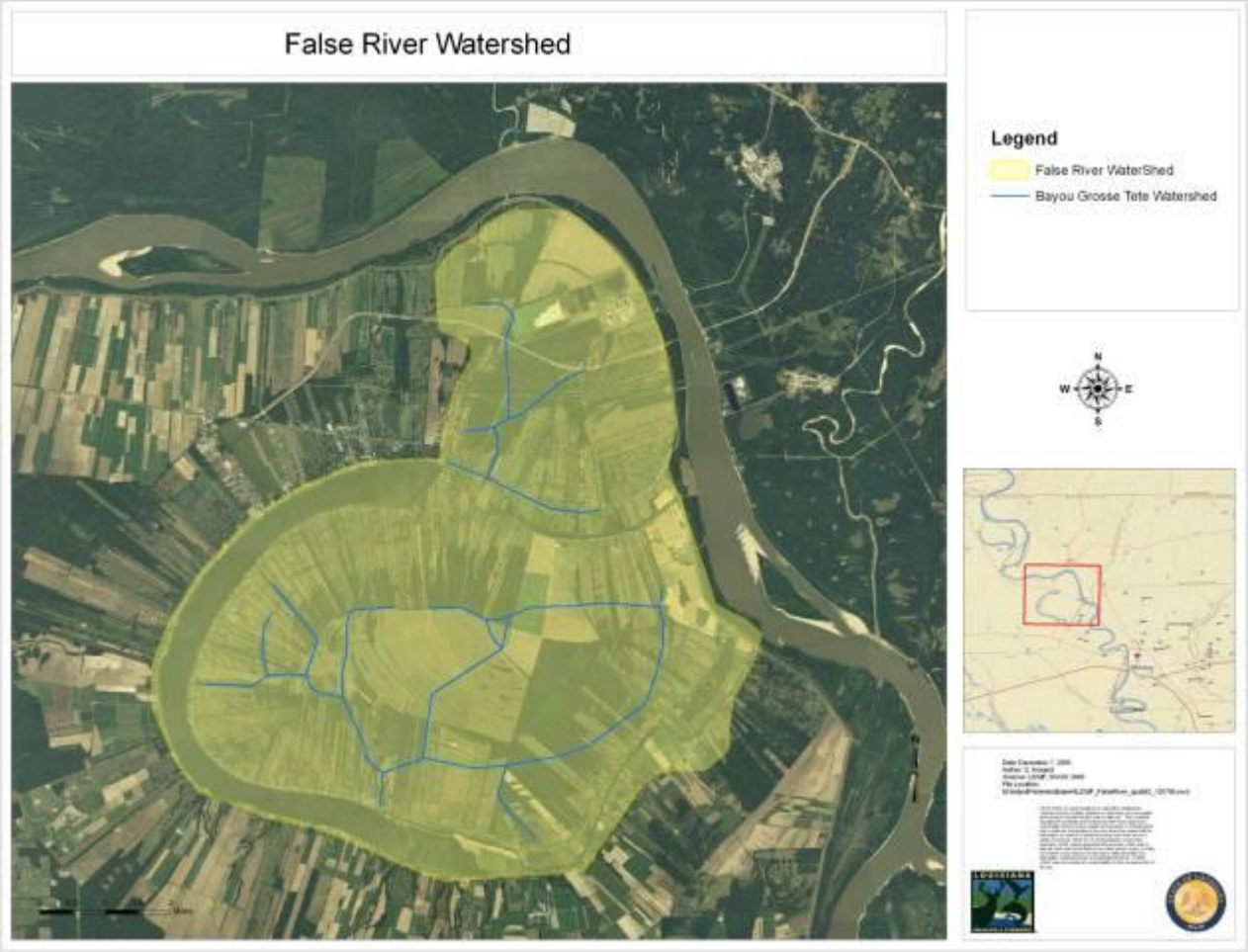
DATE	RIVER LEVEL	POSITION OF GATES	DATE	RIVER LEVEL	POSITION OF GATES
3-11-97	15.6	Closed	4-29	19.0	3 gates opened
3-12	15.6	"	4-30	19.0	"
3-13	15.8	"	5-1-97	18.8	"
3-17	15.6	3-16-97 Open 3 gates 140 at 4:30 PM	5-5	19.0	"
3-18	15.6	Closed by M. Bourke	5-6	18.8	"
3-19	15.7	"	5-7	18.6	"
3-20	15.8	" *	5-8	18.4	"
3-24	15.8	"	5-12	17.1	"
3-25	16.0	"	5-13	16.8	"
3-26	16.2	opened 4:30 PM 3 gates	5-14	16.5	"
3-27	Duliday	3-29- Closed 7:30 AM 15.6 by M. Bourke	5-15	16.2	"
3-31	15.9	Closed	5-19	16.0	"
4-1-97	15.9	"	5-20	15.8	"
4-2	15.9	"	5-21	15.6	"
4-3	15.9	"	5-22	15.5	Closed
4-7	16.9	Open 5-7:30 AM open 5 gates now 5 gates M. Bourke	5-27	15.8 15.5	opened 3 gates Closed 4:00 PM
4-8	16.6	"	5-28	15.5	"
4-9	16.4	"	5-29	15.6	"
4-10	16.2	"	6-2-97	16.0	"
4-14	15.6	" 4:30 closed 15.7	6-3	16.0	"
4-15	15.8	Closed	6-4	16.0	"
4-16	15.8	"	6-5	16.0	"
4-17	15.8	"	6-9	16.0	"
4-21	15.8	"	6-10	16.0	"
4-22	15.7	"	6-11	16.0	
4-23	15.7	"	6-12	16.0	
4-24	15.7	"	6-16	16.1	
4-28	18.8	4-27 4:30 PM 17 ft opened 3 gates M. Bourke	6-17	16.1	

POSITION OF GATES OPEN - O CLOSED - C

APPENDIX III – 2001 MISSISSIPPI HYDROGRAPH



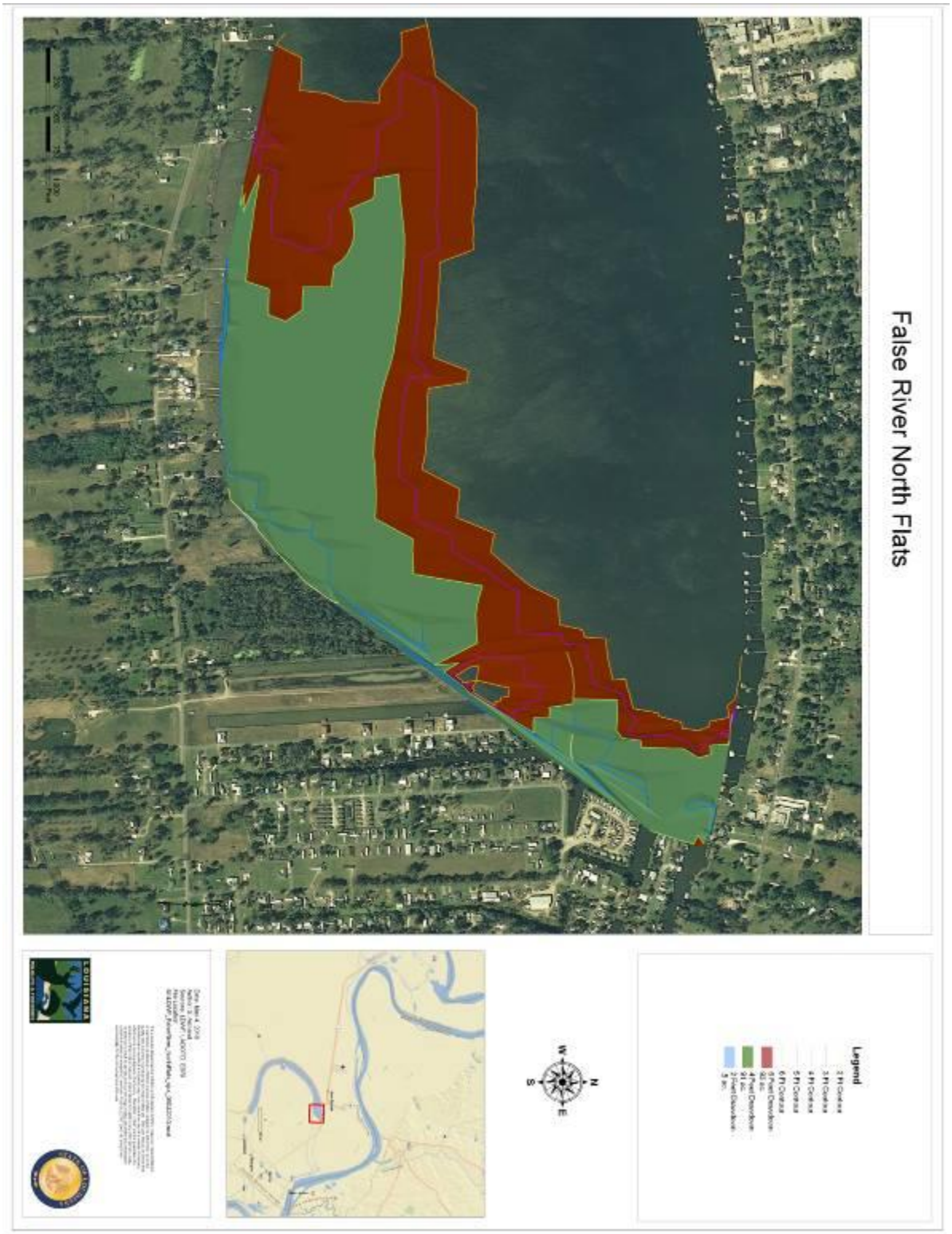
APPENDIX IV – MAP OF BGT PROJECT AREA AFFECTING FALSE RIVER



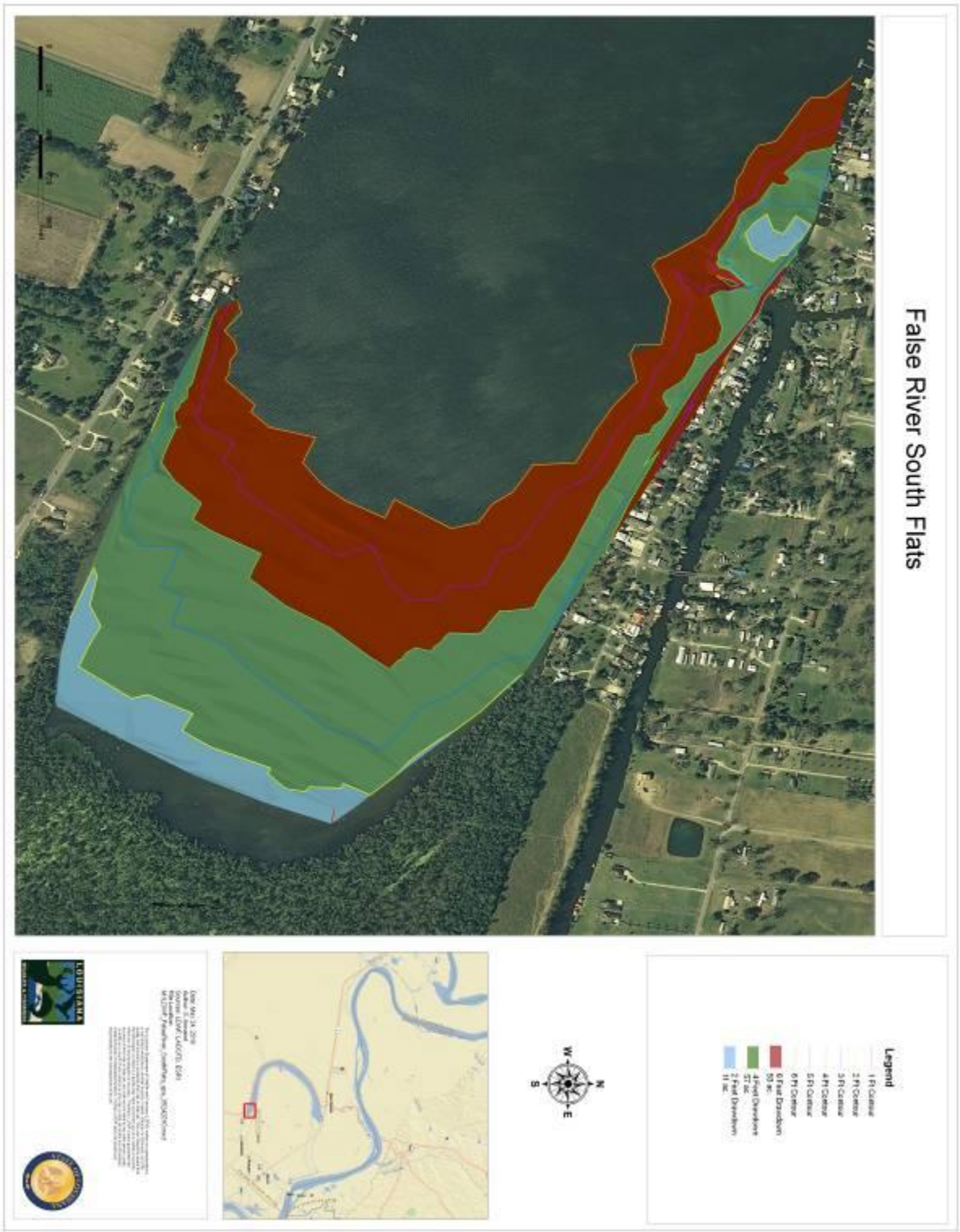
NOTE: Shaded area encompasses that portion of the Bayou Grosse Tete Watershed Project that affects False River. This area is now the new watershed for the lake. The drainage canals that were dredged during the construction phase of the project are outlined in blue. Construction on these canals was between 1988 and 1993.

APPENDIX V - False river water level management continued.

NORTH AND SOUTH FLATS DRAWDOWN EXPOSURE MAPS



APPENDIX V – False river water level management continued.



APPENDIX VI – ARTIFICIAL REEF AND NATIVE AQUATIC VEGETATION PLAN

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

FALSE RIVER
ARTIFICIAL REEF AND NATIVE AQUATIC VEGETATION PLAN

Prepared by:

Rachel Walley, Biologist Manager
District 7

2011

BACKGROUND

False River is a 3,212 acre inactive oxbow lake situated in the south eastern portion of Pointe Coupee Parish. The watershed is 37,500 acres of mostly agricultural pasture-land in the interior of The Island and mixed woodlands and pasture-land northeast of New Roads. In the late 1980's and early 1990's the Bayou Grosse Tete Watershed Project was constructed. The purpose of the project was a means of flood control for agricultural land. Since the completion of the project, False River has endured years of siltation from agricultural runoff. The result has been a loss of largemouth bass and other centrarchid habitat. False River has also become a lake of special concern due to its state of decay.

The Louisiana Department of Wildlife and Fisheries, Inland Fisheries Section is responsible for managing freshwater fisheries resources through a variety of methods including habitat improvement. Fisheries habitat can be improved in several ways. One means of habitat

improvement is the addition of cover for fish. It is known that anglers enjoy increased success when they target underwater structure. Many anglers place brush and other structure for their own use. The Inland Fisheries Section recognizes the importance of underwater structure in determining the quality of fisheries habitat. Several fisheries districts have undertaken habitat projects, which placed artificial structures into lakes and/or establishing native aquatic vegetation. Fish utilization and angler success have been positive on these projects and public interest in such projects is increasing. As a result of the loss of complex habitat in and the success of artificial reefs and establishment of native aquatic vegetation in other state waterbodies, the need has arisen for such project in False River.

OBJECTIVES

Freshwater artificial reefs and the establishment of aquatic native vegetation can be utilized to accomplish multiple objectives:

- Increase angler success.
    - For many anglers, finding fish in a water body, especially one that is new to them is a major obstacle to a successful fishing trip. Artificial reefs concentrate fish and identifying the structures on maps and with buoys makes them available to all anglers.
- Increase fisheries habitat.
    - As lakes age, flooded timber decomposes and water bottoms may accumulate silt and organic debris. This progression can lead to a reduction in fisheries productivity. If sufficient artificial cover or substrate is added, fisheries productivity can be increased.
- Establish stands of native vegetation.
    - Sufficient stands of native aquatic vegetation have several benefits. They not only are cover and food for aquatic life, but produce oxygen and decrease the rate of erosion and sediment re-suspension.

ARTIFICIAL REEFS

General guidelines

- Reef structures cannot be constructed of prohibited materials, including:
    - Tires
    - Appliances
    - Metal objects
    - Engines
    - Vehicles
    - Any other materials that potentially contains hazardous chemicals
- Artificial structures must be well anchored to prevent movement.
- Materials should be long lived in underwater conditions.
- Design should be durable to avoid damage during deployment as well as post deployment failure.
- Structures must be well marked with buoys and/or signs. Buoys may be marked to credit project sponsors.
- Project sponsors should provide marker buoys and future maintenance of those buoys.
- Structures should be easily accessible by anglers. Ideally, structures should be placed to provide multi-seasonal use by fish and anglers.

Structure

Plastic feed pallet trees

- Basic design includes a five-gallon nursery pot filled with cement to support a length of three inch PVC pipe to form the trunk of the tree. Plastic feed pallets are slid onto the pipe along with sections of four-inch plastic sewer and drain pipe serving as spacers. Pallets and spacers are alternated until reaching the top of the PVC trunk. A three-inch PVC cap is glued onto the top of the trunk to hold the pallets in place and capture air inside the PVC pipe. Trapped air serves to keep the tree upright when deployed. PVC trunks are usually five foot in length but may be longer of needed. Trunks longer than five feet are partially filled with water to reduce buoyancy. Clusters of pallet trees are deployed ranging in number from 15 to 100 depending upon desired coverage and spacing.

    - Advantages: Longevity, availability of materials, relatively low cost. Studies report that feed pallet trees are known to attract harvestable size largemouth bass, crappie, bluegill, and redear sunfish.
    - Disadvantages: None reported.
    - Recommendations: Construction and deployment of this type of structure involves considerable manpower and equipment. Handling of concrete bases requires lifting by hand in most cases. Project planning should include adequate manpower to reduce individual effort. A large working platform such as a pontoon boat or barge will increase deployment rate.

Spawning substrate

- This category consists of habitats that include sand, gravel, cobble, boulder, and mixtures thereof.
    - Advantages: Availability of materials, addresses problem of lack of existing structure. Evidence indicates use of sand and/or rock beds by sport fish including bluegill, redear sunfish and largemouth bass.
    - Disadvantages: Higher cost, algal growth, sinking, and placement in areas with too great of slope.
    - Recommendations: To minimize some of the problems associated with spawning beds, the following guidelines are offered:
    - Ten pads of washed gravel spread over suitable sites throughout the lake
        a) beds should only be placed when there is evidence of inadequate spawning habitat.
        b) beds should be placed in areas that will be exposed to some level of wave action in order to reduce siltation.
        c) beds should be placed at depths > 3 ft. if periphyton is a problem.
        d) beds should be placed in areas with a slope < 10%.
        e) beds should be placed on substrates that are able to support the weight of the material.
        f) filter cloth may be placed beneath the sand/gravel to support the weight of the materials and prevent subsidence of the spawning pad.

Example of loading out gravel on barge for transport to spawning bed site. Gravel is then washed off the barge with a water pump.

Placement of structures

Site selection for the placement of reef structures will consider access, historically popular fishing sites, water depth and areas that propose no danger to boaters, swimmers and other user groups. Initial project consists of 11 sites. Three sites situated in both, the north and south flats, three sites accessible to the public fishing piers, and two situated along the LA 1 side of the lake (see map below).

Map

Potential sites for placement of artificial fish attractant structures in False River, LA.

Monitoring

When time permits, LDWF Inland Fisheries staff will monitor artificial reef structures to determine long-term usage and success. Monitoring will include one or more of the following methods; creel surveys, SCUBA diving and underwater photography. Information gathered during monitoring will be included in the Annual Performance Report.

NATIVE AQUATIC VEGETATION

General guidelines

- Will identify, transport, and inoculate False River with a source of desired aquatic plant species.
- Plant propagules will be obtained via commercial suppliers.
- Only native plants whose strain is appropriate for USDA Hardiness Zone 8b will be considered. Plant species also will be selected based on lake habitats or anticipated environmental conditions.
- Shallow waters protected from winds and wave action will be selected for establishment of aquatic plants. High-use areas will be avoided.
- Plantings will occur before or during periods of active growth and as early as practical. Late planting reduces the length of growing season remaining and may decrease the likelihood of success.
- Once established, founder colonies will spread in two manners, including
    - Expansion (vegetative spread from the founder colony itself).

    - Colonization (formation of new colonies from fragments, seeds, etc.).
- After a culture of a particular species is established, it will be used as a source for the next generation of cultivation.

Phases

Once suitable sites are selected the project will proceed in three phases:

- Phase 1 involves planting and monitoring over a full growing season of test plants of a variety of species. Assuming suitable sediments, water quality and minimal herbivory, these plants will establish. The response of the plants will dictate the best course of action for subsequent growing seasons. Aquatic plant materials prepared for application to water body. Four beds to be spaced in suitable sites – One on each end and one mid-lake on each side.
- Phase 2 should result in the successful establishment of founder colonies of several species. During the second growing season, those species performing best during Phase 1 will receive additional plantings.
- Phase 3 colonies should expand to into new areas by vegetative and/or sexual modes of reproduction. Monitoring will continue at this stage, as large-scale disturbances can have serious consequences on newly established plant communities. Additional species may also be desirable to ensure maximum diversity, stability, and resilience of the aquatic plant community.

Monitoring

LDWF Inland Fisheries staff will monitor to determine status of planting establishment success. Information gathered during monitoring will be included in the Annual Performance Report.

LOCAL SPONSORS

Local sponsors may include interested groups or individuals that could provide funding, supplies, manpower and/or expertise. Local sponsors can include the following:

- Police Jury
- Fishing clubs
- Scout troops
- Other interested parties or individuals