# False River Watershed Council



An Annual Report to the Louisiana Legislature

April 2023

To the Distinguished Members of the House Committee on Natural Resources and Environment and Senate Committee on Environmental Quality of the Louisiana Legislature, and the People of the Great State of Louisiana April 26, 2023

Dear Members:

We, the members of the False River Watershed Council, have completed this Annual report in accordance with House Concurrent Resolution No. 35 of Regular Session 2020. The original May, 2013 report was completed in accordance with House Concurrent Resolution No. 123 of Regular Session 2012 and updated in April 2018 in accordance with House Concurrent Resolution No. 52 of Regular Session 2017

Specifically, the False River Watershed Council has assembled and prepared this document, which presents the activities undertaken by the Council during the previous year, and lists the priorities for the upcoming year. It is the intent of this Council, interested stakeholders, and all those involved in the project to preserve, protect, and enhance the quality of False River, located in Pointe Coupee Parish, now and for generations to come.

The report includes the results of the completed False River Aquatic Resources Ecosystem Restoration Project. We look forward to any further guidance or feedback as we press forward with the False River Aquatic Resources Ecosystem Restoration Project.

We appreciate the support of the Louisiana Legislature as we move forward with this plan of action.

Sincerely yours,

The Members of the False River Watershed Council

# **False River Watershed Fact Sheet**

## False River Watershed:

- Pointe Coupee Parish
- Total area: ~35,000 acres
- Area of "The Island": ~18,400 acres (53%) (defined herein as east of False River, South of False Bayou, north of the Chenal and west of the Mississippi River)
- Discharge Bayou drainage area (M-1 and associated canals): ~17,600 acres (50%)
- M-2 Canal and False Bayou drainage area: ~9,500 acres (27%)
- Cultivated area (2011): ~2,300 acres (7%)
- Developed area (2011): ~1,700 acres (5%)

# False River (lake)

- Owned by the State of Louisiana
- Oxbow/horseshoe lake abandoned (~1722) meander of the Mississippi River
- Area: ~3,100 acres (3,200 acres with associated wetlands)
- Shoreline: 117,000 feet (22 miles)
- Developed shoreline: 110,000 feet (21 miles)
- Pool stage: 16 feet above mean sea level (NGVD)
- Volume (pool stage): 67,300 acre-feet (22 billion gallons)
- Maximum depth: 65 feet
- Average depth: 21 feet
- Highest water level recorded: 23.2 feet (1983)
- Lowest water level recorded: 10.6 feet (2016)
- Primary Outfall Lighthouse Canal Structure maximum capacity: 1,400 cfs (three roller gates)
- Lighthouse Canal Structure owned by LDOTD and operated by PCPJ
- Secondary Outfall Bayou Sere invert eight: 15 feet (outflow start at 16.5 ft).
- Estimated sediment influx (2011 NRCS RUSLE2 model): 21,000 tons
- South Flats Island: 16.5 acres (3,500 feet of shoreline)

Sources: LDNR, 2012 & 2017; NRCS, 2011 & 2017; USGS, 1999; LDWF, 2011 & 2016; USACE, 2011

Note: Front cover picture of False River is courtesy of LDWF.

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Kevin Gravois, P.E., Principal Professional Engineering Consultants Corporation 7600 Innovation Park Drive Baton Rouge, LA 70820 Phone: (225) 769-2810 / Email: kgravois@pecla.com The FRWC has been actively advising and supporting the actions of the Pointe Coupee Police jury and now the Pointe Coupee Parish Government. Since 2011, the Council has issued a Watershed and a Revised Watershed plans detailing recommended steps to improve the water quality, and aquatic habits and fisheries of the lake. Recommended activities included the dredging and deepening of the South and North Flats, and the reduction of sediment influx into the lake. In 2014, 159,700 cubic yards of sediments were dredged from the south Flats and used to create a16.5 acres island, providing 3,500 feet of edge habitat. In 2017, hydromodifications on the two main channels discharging into the lake were completed reducing the sediment and nutrients influx into the lake. In 2020, the North Flats was dredged and deepened resulting in 66,000 cubic yards of loose sediments being removed from the lake. In addition, 24,000 cubic yards were removed from the South Flats and added to the island. Concurrently with this work supported by Capital Outlay funding and a grant from NRG, the Louisiana Department on Wildlife and Fisheries conducted five drawdowns of the lake to further help improve the water quality. One of these drawdown occurred in 2016, significantly helping reduce the flooding impact that year.

This third annual report update is submitted to the Louisiana Legislature, specifically the House Committee on Natural Resources, and Environment and the Senate Committee on Environmental Quality, in accordance with HCR 35 of 2020. Recent (since the April 2022 annual report to the legislature), and ongoing activities, concerns and maintenance issues by the False River Watershed Council (FRWC) are as follows:

## 1. Meetings of the False River Watershed Council

The FRWC met in person at the Parish Government offices in New Roads on June 8, 2022, and by conference call on April 11, 2023. The agendas and minutes of the council meetings can be found on the False River Watershed Council webpage on the LDNR website at <a href="http://www.dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=924">http://www.dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=924</a>

## 2. Ongoing repair to the lake and Discharge Bayou shoreline

As previously discussed, dredging of the North and South flats has been performed increasing the water depth in these areas to improve fisheries habitat and also provide greater access and safety for boaters. Repairs of bulkheads along Discharge Bayou and the Lighthouse Canal has occurred and will continue as additional funding is secured. These features are important in managing both drainage and lake level management of False River and its watershed.

## 3. Lake Drawdown

Beginning in 2016/2017, LDWF and Pointe Coupee Parish have conducted water level drawdowns at regular intervals (Figure 1), the next scheduled drawdown will be in fall/winter of 2024/2025.



Figure 1: False River Stage

Drawdowns commence after Labor Day during scheduled years. The lake is dewatered at a rate of 1.5 inches per day to a maximum of 6 feet below pool stage. The lake is held at the lowest level possible until January 15th of the following year, at which time the water control structure is closed and the lake is allowed to refill. During drawdowns, the lake remains open to fishing and other recreational activities.

Drawdowns are a commonly used tool for lake/reservoir managers, not only in Louisiana, but also by a majority of natural resource management agencies across the United States. They are most commonly utilized in lakes/reservoirs where water levels, if left to themselves, fluctuate infrequently. The infrequency of fluctuation often has an intended purpose, which is to maintain a stable water level for a variety of reasons. Water levels are often controlled by weirs, dams, siphons, etc. Sometimes levels are controlled for flood mitigation, or aesthetics, or access, etc. The consequence of these actions is often an increase in organic matter deposition, reduced sportfish populations, increased turbidity, and loose substrates. In natural systems, not influenced by dams or weirs, often there is a flood pulse in the spring when water levels increase above normal, followed by a period of low water in the fall when water levels are below normal. Drawdowns mimic this natural cycle that has been interrupted by anthropogenic factors. The benefits are multiple, many of which are already being observed in False River after a series of drawdowns. Drawdowns often lead to an increase in sportfish production due to habitat improvement. Lake substrate is improved and utilized as spawning habitat and a base for beneficial aquatic vegetation. Pre-spawn body condition of predatory sportfish is improved due to increased availability of forage. Sediments are consolidated and organic matter is decomposed and compacted, thus creating depth as well as a firmer substrate. Turbidity is reduced by consolidation of exposed sediments. Herbaceous terrestrial plants are often established, offering increased productivity and habitat once water levels return to normal.

Water level manipulations are an integral part of the management of False River. Drawdowns will continue to be implemented at regular intervals as part of the overall management strategy to further improve the habitat quality and productivity of False River.

# 4. Lake Habitat and Fisheries Update

False River continues to be stocked annually with Florida strain Largemouth Bass (Table 1). Other species are also stocked, although not on an annual basis.

	FLORIDA LARGEMOUTH BASS	HYBRID STRIPED BASS	BLUEGILL SUNFISH	CHANNEL CATFISH	BLACK CRAPP IE	
2018	8,916	5,025	4,682		16,838	
2019	6,090	16,430		7,240		
2020	6,080					
2021	6,070					
2022			5,000		10,970	
2023	6000 (requested)					

TABLE: 1 Stocking efforts by species by year for False River, LA 2018 – 2023.



LDWF Inland Fisheries continues to sample the fishery of False River, utilizing a variety of gears and methods. All samples are performed per LDWF Inland Fisheries standardized sampling protocol. Table 2 include a summary of samples collected since 2018.

	GEAR			
2018	Electrofishing, 8 stations, spring & fall / Lead nets – 6 stations / Gill			
2010	nets $- 6$ stations / Seine $- 5$ stations			
2019	<b>2019</b> Electrofishing, 8 stations, spring only / Seine – 5 stations			
2020	Electrofishing, 8 stations, spring & fall / Lead nets – 6 stations / Gill			
2020	nets – 6 stations			
2021	Electrofishing, 8 stations, spring only / LMB genetic sampling			
2022	Electrofishing, 8 stations, fall only / Lead nets – 6 stations / Gill nets			
2022	– 6 stations / LMB genetic sampling			
2022	Electrofishing, 8 stations, spring & fall / Lead nets – 6 stations /			
2023	LMB genetic sampling			

## TABLE 2: LDWF sampling on False River, LA from 2018 – 2023.

Data collected from standardized sampling are utilized to analyze various characteristics of the fishery of False River. Below are graphs representing catch rates of Largemouth Bass (Figure 2), captured by electrofishing (Figure 3). In recent years, beginning in 2015 and following water level reductions at regular intervals, dredging, and improvements in the watershed, total catch rate as well as catches of stock-, quality-, and preferred- size LMB have shown to be increasing. Not only is there an increasing trend in catch rates from 2016 to 2021, there is also less variability in catch rates over the same time span. These higher numbers and reduced variability indicate that more habitats are available for successful spawns and that the fishery is responding positively to improved habitat conditions in the lake. Not since the lake was designated as a "trophy lake" have catch rates reached the level of magnitude and consistency evident in recent years.



Figure 2: The mean CPUE in number per hour for Largemouth Bass collected from False River, LA, during spring electrofishing from 1989 to 2021.



Figure 3: The mean CPUE for stock- (8"-12"), quality- (12"-15") and preferred-size (15"-20") largemouth bass collected from False River, LA during spring electrofishing from 2000 to 2021.

LDWF Inland Fisheries is responsible for managing freshwater fisheries resources through a variety of methods, including habitat improvement. One means of habitat improvement is the addition of complex cover for fish. It is known that anglers often enjoy increased success when they target objects that provide cover. In the spring of 2019 and 2020, LDWF Inland Fisheries staff hinge-cut approximately 500 yards of willow trees along the east bank of the island in the south end of False River. The trees were cut near-shore, along the bank, and allowed to fall into the water perpendicular to the shoreline. In the summer of 2019, LDWF Inland Fisheries created an artificial reef made of 120 structures in False River. The structures were constructed from scrap polyethylene pipe, and were placed in 15-20 foot depths in an area of the north flats. Dense areas of cover can provide nursery habitat for young fish and ambush points for feeding fish. These downed trees and artificial structures will also be colonized by periphyton, which in turn is a food source for macroinvertebrates.



# 5. False River Water Quality

LDEQ has assigned designated uses to the waterbodies in Louisiana based on what type of activities each waterbody must sustain and has applied water quality standards to assure these designated uses are supported. The waterbodies are monitored periodically to assess whether or not these water quality standards are met which in turn indicates whether or not their designated uses are supported. The IR indicates that False River, which is in subsegment LA120108, is fully supporting its designated uses of primary contact recreation (swimming) and secondary contact recreation (boating). However, the IR also shows that False River is not supporting its designated use of fish and wildlife propagation (fishing) due to low levels of dissolved oxygen.

The suspected source of this impairment shown in the report is "shallow lake/reservoir." Low dissolved oxygen continues to be the most frequently cited suspected cause of impairment in Louisiana with 234 subsegments affected. LDEQ works to address water quality impairments through assigning appropriate effluent limitations to permitted wastewater discharges, working to alleviate nonpoint sources of pollution, monitoring the waterbodies, assessing of water quality data, inspecting facilities/activities that may/are discharging pollutants and applying enforcement actions as required.

Additionally, it is expected that the dredging work performed at False River to deepen the North and South Flats will also serve to improve the low dissolved oxygen that is attributed to a shallow lake environment.

# **References**:

False River Watershed Council, 2013. An Interim Report on HCR 123 of 2012 Regular Legislative Session: report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 125.

False River Watershed Council, 2018. False River Watershed Interim Report on HCR 52 of 2017 Regular Legislative Session: : report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 165.

False River Watershed Council, 2021. False River Watershed Annual Report on HCR 35 of 2020 Regular Legislative Session: : report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 26.

False River Watershed Council, 2022. False River Watershed Annual Report on HCR 35 of 2020 Regular Legislative Session: : report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 33.