Lake Providence Watershed Council



An Annual Report to the Louisiana Legislature
April 2024

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

April 30, 2024

Dear Senators and Representatives:

We, the members of the Lake Providence Watershed Council, have completed this Annual report in accordance with House Concurrent Resolution No. 96 of the Regular Session 2020.

Specifically, the Lake Providence Watershed Council provides this update to the watershed management plan submitted to the legislature in April 2021. It is the intent of this Council, interested stakeholders, and all those involved in the project to preserve, protect, and enhance the quality of Lake Providence located in East Carroll Parish - now and for generations to come.

The citizens of Louisiana deserve to have a restored and viable Lake Providence. The lake restoration and revitalization can be accomplished through engineering, education, enticement, as well as, enforcement of existing and new regulations focused on best management practices.

This update report describes the on-going activities and efforts by the Lake Providence Watershed Council, East Carroll Parish Police Jury and local stakeholders, and offers background information, graphs, charts and maps, and further recommendations for your review. We look forward to any further guidance or feedback as we press forward with managing the Lake Providence Watershed Resources Project.

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

Sincerely yours,

The Members of the Lake Providence Watershed Council

Lake Providence Watershed Fact Sheet

Lake Providence Watershed:

- East Carroll Parish
- Total area: ~17,000 acres
- Cultivated area: ~11,000 acres (64%)
- Developed area: ~1,600 acres (14%)
- Forested/Other Use area: ~2,700 acres (12%)
- Open water: ~1,700 acres (10%)
- Average Annual Precipitation: ~57 inches

Lake Providence

- Owned by the State of Louisiana
- Oxbow/horseshoe lake abandoned meander of the Mississippi River
- Area: ~1,380 acres (3,200 acres with associated wetlands)
- Shoreline (including the Chute): ~74,000 feet (14 miles)
- Developed shoreline: ~46,000 feet (9 miles)
- Pool stage: ~90 feet above mean sea level (NGVD)
- Maximum depth: ~37 feet
- Average depth: ~12 feet
- Primary Outfall Tensas Bayou spillway
- Secondary Outfall Baxter Bayou Structure

Sources: LDWF, LDENR, LDOTD, NRCS

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This fourth 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 96 of 2020. Ongoing Activities, Concerns and Maintenance Issues by the Lake Providence Watershed Council (LPWC) are as follows:

1. Meetings of the Lake Providence Watershed Council

The LPWC met in person in Lake Providence on August 2, 2023 and January 24, 2024, and by conference call on November 1, 2023 and April 17, 2024. The agendas and minutes of the council meetings can be found on the LPWC webpage on the Louisiana Department of Energy and Natural Resources (LDENR) website at http://www.dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=1316.

2. Replacement of the Tensas Bayou Weir

In 2023, the East Carroll Police Jury (ECPJ) secured the funding and contracted the design and replacement of the Tensas Bayou Weir (Figure 1 and see Appendix A and B).

3. Sediment influx into the North Flats

The council notes that by far the most successful action has been the cover crop program on the surrounding agriculture land that peaked in 2018 and has since diminished due to lack of public funding. During this period, there was high participation in the program administered by NRCS which funded the seeding of agriculture land which served to stabilize the soil and decrease the amount of sediment movement into the lake. It is obvious that this effort greatly enhanced the quality of the water which resulted in greatly improved quality of fish and overall recreational use of the lake.

It is acknowledged that the greatest threat to the viability of the lake is the large amount of sediment that continues to enter at the north end from Jack Falls Bayou (Figure 2 see Appendix C). This waterway takes runoff from approximately 4,500 acres of agricultural land. So far, the council has not developed a plan to address this. Any remedy will be expensive and require a sacrifice of private lands. Some possible remedies are diversion of some of the runoff to outlet, sediment basins, or more intense soil stabilization measures.

4. Lake Providence Water Quality

The Lake Providence fish and wildlife propagation use, identified as impaired in 2016 due to high total dissolved solids, was fully restored as per the 2020 water quality assessment. The 2022 assessment, however, indicates that use is now impaired by low dissolved oxygen (DO) due in part to agricultural land uses. The water quality standard for DO in the lake is 5.0 mg/L. The data used for the 2022 assessment showed a DO excursion rate of 10.3%, exceeding the 10% threshold.

Nutrient and sediment runoff from agricultural fields contributes to low DO. Changes in the watershed potentially associated with the degraded water quality may include reduced conservation practice implementation on cropland due to the conclusion of the USDA NRCS' BMP incentives project in the watershed, and weather-related obstacles to implementation. NRCS' Mississippi River Basin Initiative work concluded in October 2020.





Figure 1: Tensas Bayou Weir in January 2023 (top) and in January 2024 (bottom).



Figure 2: Lake Providence subbasin. Colored in yellow are field planted in 2022 in corn, in green soybeans, and in red cotton. All other areas represent undeveloped or developed land and open water (data: USDA CropScape)

Additional runoff from exposed streambanks after dredging/clearing/snagging or other structural work that disturbs streambanks and streambeds may exacerbate low dissolved oxygen (DO).

5. Repairs at the Baxter Bayou Control Structure

Baxter Bayou only allows water to flow out of the lake at high stage, otherwise reverse flow can occur at time of unevenly distributed precipitation. Currently, the structure does not allow for lake level manipulation as the gate valve is in disrepair and can no longer be operated. In addition, the structure is bypassed by the flowing water, both along the side and beneath the structure. The East Carroll Parish Police Jury has been working for the past several years with the Louisiana Watershed initiative to fund the repairs.

6. Ongoing Lake Level Monitoring

The lake monitoring gage installed at the former swimming pier by the Louisiana Geological Survey was moved to a new location in September 2021 after a portion of the pier received damaged (e.g. collapse) during the June 2021 flood resulting in the gage no longer being able to be access from shore. The new location of the gage is on a private pier. Due to the pandemic restrictions and because the gage was not accessible for an extended period of time, some data (most of 2021) was lost, including that for the flood on June 2021 (Figure 3). To display the data of the 2021 flood, Figure 4 shows the stream stage data from the Corps gage on Tensas Bayou at Transylvania, LA.

7. Louisiana Watershed Initiative

The East Carroll Parish Police Jury has had a representative participating in the Louisiana Watershed Initiative meetings since the onset of the program.

8. U.S. Army Corps of Engineers Project Cleaning Bayou Macon, Big Colewa Bayou and Tensas River

The USACE in Coordination with the Fifth Levee District began the Tensas River clean out. The logging took place along a two miles stretch near Swan Lake, 8 miles southwest of Lake Providence (see Appendix D).

9. Christmas Tree Aquatic Reefs Project

In 2023 and 2024 (Appendix D), LDWF sank numerous Christmas trees throughout the lake. The trees were donated by the public and local garden marts. The trees were sank individually or in 2-3 tree bundles placed near the shoreline between depths of 3 to 15 ft. They will provide needed cover for young-of-year fish and for feeding opportunities for Largemouth Bass, crappie, and sunfish. They can also be utilized by anglers as fish attractors. The trees have been deployed at a total of 16 locations thus far and will hopefully provide a preferred alternative habitat in the absence of native aquatic vegetation, which is a limiting factor of sport fish production in Lake Providence.

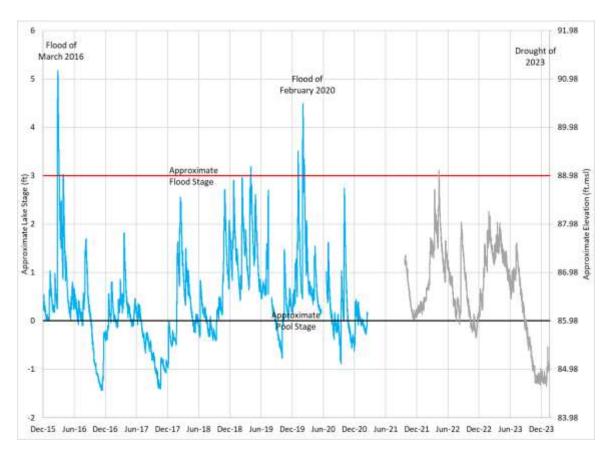


Figure 3: Recorded lake stage in feet above approximated pool stage (~90 ft.NAVD29).

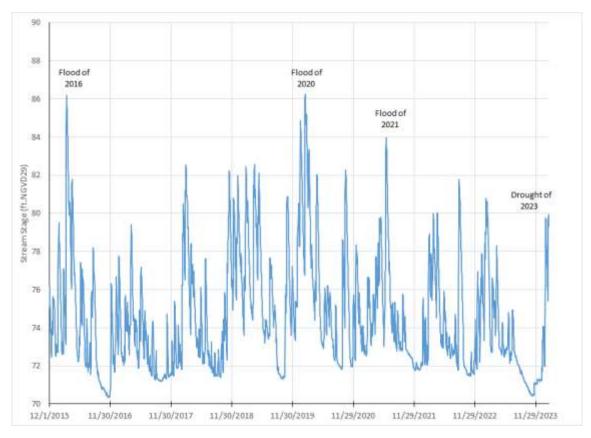


Figure 4: Recorded stream stage in feet (NAVD29) at the gage on Tensas Bayou at Transylvania.

10. LDEQ Nonpoint Source, Clean Water Act Section 319 Program

LDEQ 319 monitoring of the watershed concluded in October 2021, one year past the conclusion of NRCS' conservation practice implementation under the Mississippi River Basin Initiative. Monitoring continues through LDEQ's ambient water quality monitoring program as part of the statewide water quality assessment.

11. Ongoing Fisheries Data Collection

Spring and fall electrofishing was conducted in 2023, while sampling with gill nets occurred in January 2024. Electrofishing is primarily used to assess the Largemouth Bass population, which often indicates the status of the fishery. Spring electrofishing can also provide information about the crappie population if it occurs during the spawning season. Gill nets are used to assess populations of commercial species such as buffalo, drum, and catfish and also species that aren't efficiently sampled by other means.

Electrofishing in 2023 revealed low abundance of Largemouth Bass. Catch per hour (CPH) rates were 27 and 17 from the spring and fall samples, respectively. A more desirable CPH rate would be near 100. Though abundance appears to be low, size distribution was normal, with most size classes represented (Figure 5).

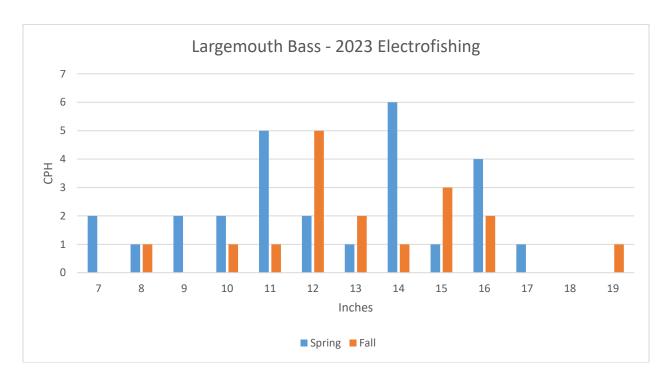


Figure 5. Largemouth Bass Catch per Hour from spring and fall electrofishing samples in Lake Providence, 2023.

Gill net samples conducted in January 2024 revealed an abundance of buffalo fish and Channel Catfish. Very few other species were caught. It appears that there is an adequate abundance of these species to support a commercial fishery.

12. Other Funding Sought and Supported

12.1 Capital Outlay

East Carroll Parish Police Jury submitted an \$400,000 (\$100,000 Priority 1 and \$300,000 Priority 5) request through capital outlay for the Spillway Structure Repairs for Lake Providence Lake and 3 Cleaning of Outfall Canal from the Lake Downstream, 4 Planning and Construction for FY24-25.

Bibliography:

Lake Providence Watershed Council, 2016. An Interim Report to the Louisiana Legislature May 2016: report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 125.

Lake Providence Watershed Council, 2020. An Interim Report to the Louisiana Legislature April 2020: report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 42.

Lake Providence Watershed Council, 2021. An Annual Report to the Louisiana Legislature April 2021: report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 19.

Lake Providence Watershed Council, 2022. An Annual Report to the Louisiana Legislature April 2022: report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 41.

Lake Providence Watershed Council, 2023. An Annual Report to the Louisiana Legislature April 2023: report submitted to the House Committee on Natural Resources and Environment and the Senate Committee on Environmental Quality, pp. 28.

Appendix A Photographs of the New Tensas Bayou Weir



Photo A1: On-going repair at the Tensas Landing boat launch. Photo taken 1/25/2024 by Thomas Van Biersel



Photo A2: Finished repair at the Tensas Landing boat launch. Photo taken 1/25/2024 by Thomas Van Biersel.



Photo A3: On-going repair at the Tensas Landing boat launch. Photo taken 1/25/2024 by Thomas Van Biersel



Photo A4: Finished repair at the Tensas Landing boat launch. Photo taken 1/25/2024 by Thomas Van Biersel



Photo A5: Finished repair at the Tensas Landing boat launch. Photo taken 2/14/2023 by Ryan Daniel

Appendix B December 14, 2023 Providence Journal Article



PO BOX 152 LAKE PROVIDENCE, LA 71254

CE JOURNA

The Award-Winning Pulse of East Carroll Parish





UPDATES to INFRASTRUCTURE

Two police jury projects are well underway and both should be completed by the end of the year, according to Juror Roger Clement. The construction of the new Tensas Bayou weir off of Highway 134 (above) should help in keeping lake levels ideal in the future. The paving of Oswalt Road (at left) already makes for a smoother ride and should be done before Christmas.

HOSPITAL UPDATES

Patients slow to seek care from other providers

by Billy Coleman

East Carroll Parish Hospital's clinic continues to wrestle with patient confusion over appointments with their medical providers, Ladonna Englerth, East Carroll Parish Hospital administrator. reported to the hospital board this

Englerth said there was no confusion when the medical providers had their own physical locations, but now that various clinics are under one roof and one name, patients seem skittish about seeing other providers if their primary care doctor is unavailable.

"When Amy Hale was at Family Medical Clinic, and took a day off, the patients who went there still came in if they needed to see some one and they needed to see some-one and they saw the people that worked as part of that team. The same is true about the patients who visited Dr. Simon at Family Prac-tice Clinto. And we want them to know that it's still the same. Those teams are still in place. If you are a patient that Amy has been seeing for years, we are not trying to make you see Dr. Simon or vice versa. They both still have their team that you can see even when they are not there instead of waiting until they return if they are off for a few

See HOSPITAL, page 5

Finances at hospital on solid footing

by Billy Coleman

Appendix C Jack Falls Bayou Photographs



Photo C1: Down flow view of the discharge of Jack Falls Bayou into the North Flats of Lake Providence (taken by Kristi Butler on 1/25/24).



Photo C2: Down flow view of the discharge of Jack Falls Bayou into the North Flats of Lake Providence (taken by Kristi Butler on 1/25/24).

Appendix D Tensas Bayou Tree Clearing Photographs

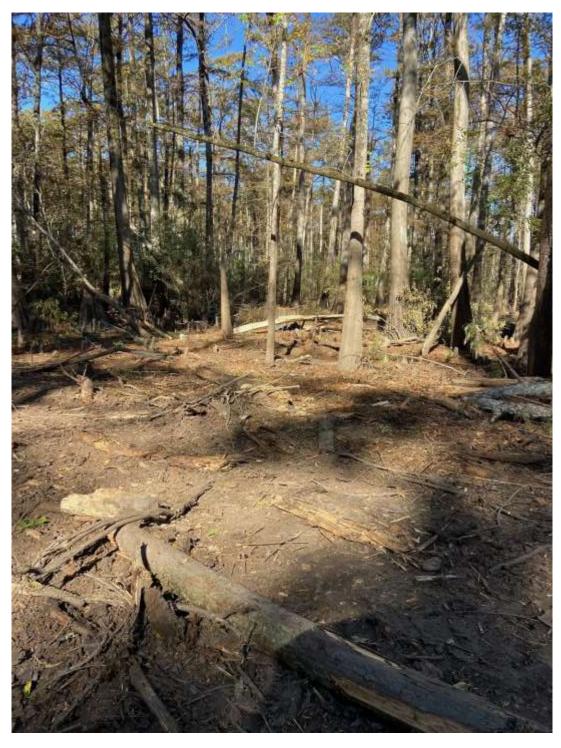


Photo D1: View of the ongoing Tensas Bayou clean-out (taken by Reynold Minski Fall 2022).



Photo D2: View of the ongoing Tensas Bayou clean-out (taken by Reynold Minski Fall 2022).

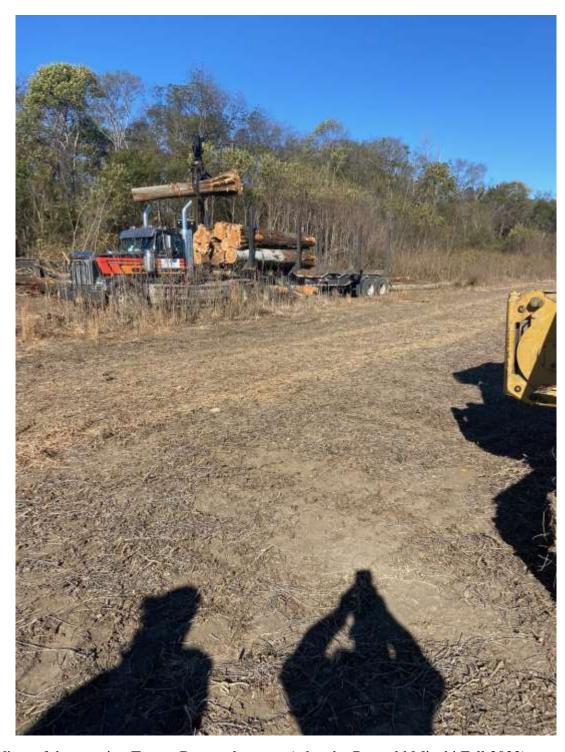


Photo D3: View of the ongoing Tensas Bayou clean-out (taken by Reynold Minski Fall 2022).



Photo D4: View of the ongoing Tensas Bayou clean-out (taken by Reynold Minski Fall 2022).



Photo D5: View of the ongoing Tensas Bayou clean-out (taken by Reynold Minski Fall 2022).

Appendix E

Lake Providence Christmas Tree Aquatic Reefs Project Photographs



Photo E1: View of some of the tree provided by stakeholders and ballast to make aquatic reefs (taken by Ryan on 2/19/24).