Atchafalaya BASIN

FY 2019 Annual Plan

Atchafalaya Basin Program

America's Largest River Swamp

Louisiana Department of Natural Resources
Atchafalaya Basin Program

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Our mission is to Conserve, Restore, and Enhance the natural habitat of the Atchafalaya Basin and give all people the opportunity to enjoy the Atchafalaya Experience.

from DNR Secretary Thomas Harris

February 1, 2018

Dear Members of the Louisiana Legislature,

I am pleased to present to you this Fiscal Year (FY) 2019 Atchafalaya Basin Annual Plan, developed in accordance with Act 606 of the 2008 Regular Session of the Louisiana Legislature. Act 606 requires the Atchafalaya Basin Program (ABP), within the Louisiana Department of Natural Resources (DNR), to identify water management, access, and recreation projects, make recommendations for state funding, and implement projects that best provide for those goals.

Louisiana is blessed to be the home of our nation's largest and most productive river swamp and we recognize the tremendous responsiblity we have to preserve this natural treasure and provide access for our residents to experience it. Our precious Atchafalaya Basin spans eight parishes and includes more than 800,000 acress of bottomland hardwoods, swamps, bayous and backwater lakes along the Atchafalaya River from Simmesport to Morgan City. Over 250 species of birds and more than 100 species of fish are home here. This bountiful basin also attracts thousands of fishermen, boaters, campers, hunters, bicyclists, and bird watchers each year, and with the new Atchafalaya Basin GeoTrail, it is also becoming a popular destination for geocaching.

This FY 2019 Annual Plan includes descriptions of five priority projects to improve water quality and water management in the Basin - Grand Lake Depth Restoration, hydrologic restoration in the East Grand Lake Upper Region, a study of the hydrology and ecosystem of Flat Lake, Grand Lake Depth Restoration, and the Buffalo Cove Water Management Project. The Annual Plan also includes descriptions of other projects like extension of the Butte La Rose Boat Launch, and upgrades to the Grand Avoille Cove Boat Launch and Sandy Cove Landing. Additional information about the history and culture of the Atchafalaya Basin, a description of the ABP and the Annual Plan process, previous Annual Plans, a map of the water management units, and other related material are available to read, print and share on our website at www.basin.la.gov.

I want to thank members of the Research and Promotion Board, Technical Advisory Group, and Legislative Oversight Committee, as well as our ABP staff and local residents for their work in identifying and prioritizing projects throughout this FY 2019 Annual Plan process. We also thank you - our legislators - for your continued support of the Atchafalaya Basin Program. We are grateful for the opportunity to work with you to preserve the resources of the Atchafalaya Basin and provide opportunities for Louisianans to enjoy this beautiful basin for decades to come.

Sincerely,

Thomas F. Harris, Secretary
Louisiana Department of Natural Resources

Swamp Life Expo

FY 2019 Project List

Water Quality/Water Management Projects

No new projects were nominated for FY 2019. The Technical Advisory Group (TAG) reviewed all previously approved projects and prioritized them according to viability and need.

The following projects were removed from the previous list of prioritized projects (as provided in the FY 2016 Annual Plan) because of spoil disposal cost and/or lack of landowner cooperation: Little Bayou Pigeon, Big Bayou Pigeon, and Pigeon Bay Water Management Unit (WMU).

One previously approved project was added to the priority list: Flat Lake Study. This project received priority consideration because of its potential to assist with collaboration between ABP and the Coastal Protection and Restoration Authority (CPRA) on the possibility of utilizing Atchafalaya Basin sediment resources on projects in the Coastal Master Plan.

The updated priority list is as follows:

1. **Grand Lake Depth Restoration**
2. **East Grand Lake Upper Region**
3. **Flat Lake Study**
4. **Murphy Lake Depth Restoration**
5. **Buffalo Cove Water Management Project**

FY 2019 Water Quality/Water Management Project Descriptions

Grand Lake Depth Restoration (201601)

A canal blockage at the Atchafalaya River was breached in 2011 and subsequently washed out completely. The opening allowed large amounts of sediment to enter and settle in Grand Lake. The incoming sediment rapidly formed a sandbar where there was previously open water. The filling of Grand Lake is a threat to public access and aquatic habitat. The TAG identified this project as the number one priority in the FY 2016 Annual Plan process because of the importance of preserving the remaining open water habitat. They reaffirmed the importance of the project in the FY 2019 Annual Plan.

A blockage at the Atchafalaya River was completed in January 2017

Status Report

This project received funding reallocated from projects designated as unable to proceed in FY 2016. Plans for this project have undergone several alterations during the planning process. Initially, the project was to restore the blockage at the Atchafalaya River and remove the sandbar from the lake. It was then combined with the adjacent depth restoration of Little Bayou Pigeon, because the proximity of the two projects made them more cost effective when completed at the same time. The Little Bayou Pigeon restoration project was later separated from the Grand Lake project after the ownership boundary was challenged by the adjacent landowner.

Restoration of the blockage at the Atchafalaya River was completed by a private company in January 2017, and ABP has entered into a cooperative agreement with that company to share the cost of dredging the lake and placing the dredged material in the canal. Sediments removed from Grand Lake will be used to fill in the canal behind the blockage; however, hydrology of the surrounding area will be maintained by leaving Schwing Chute open. Given this disposal strategy, the volume of sediment dredged from the lake will be limited by the holding capacity of the canal. This means that part of the sand bar will remain in the lake once the project is complete.

The project is expected to be completed in 2017 and will then be removed from the priority list.

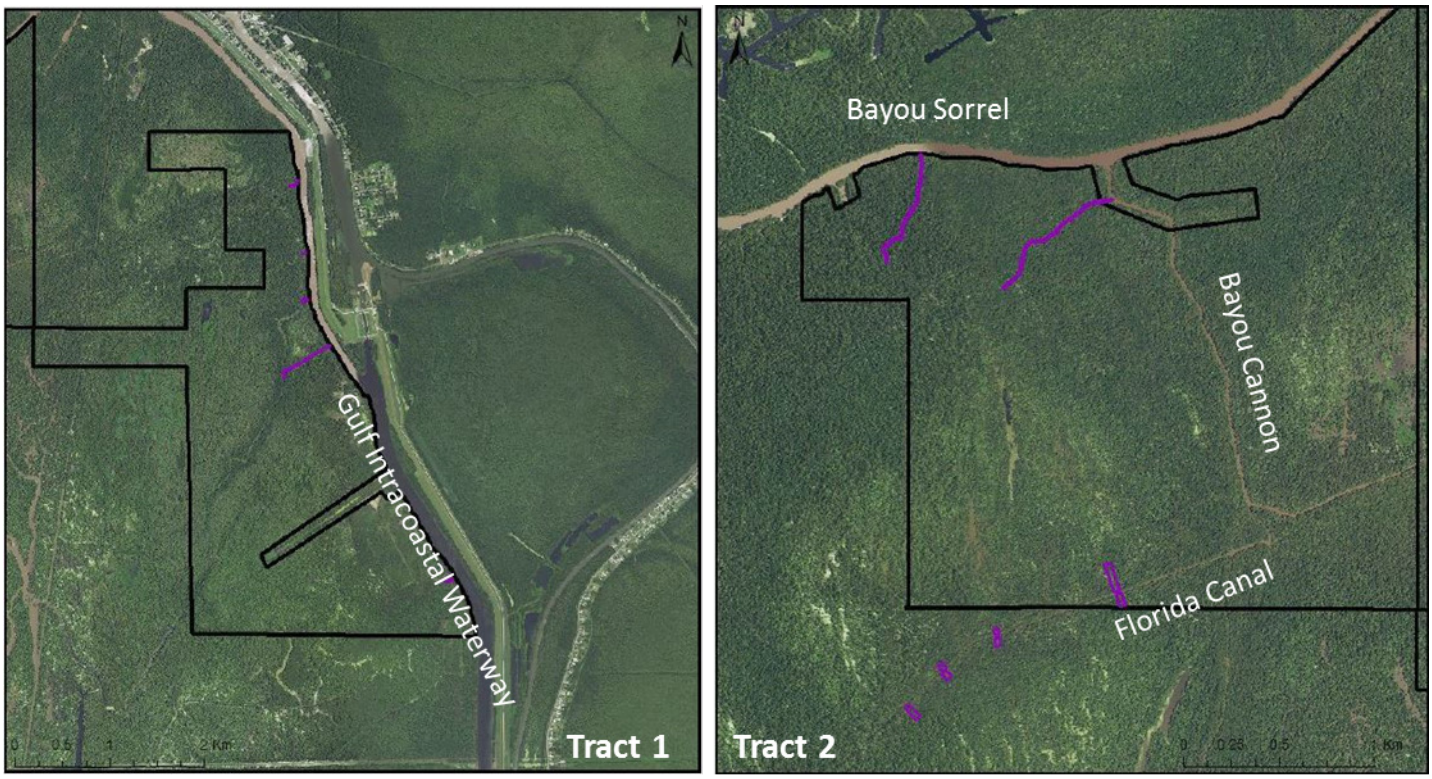
East Grand Lake Project (201006)

This project was initially approved in the FY 2010 Annual Plan process as "Development of a Complete and Specific Plan to Address Water Quality and Sedimentation in East Grand Lake/Flat Lake/Upper Belle River Management Units Through Modification of Water & Sediment Inputs." The project was intended as a first step toward realigning water flow patterns and strategically redirecting sediment in the East Grand Lake (EGL) project area, and the Upper Region was chosen as a starting point.

The EGL Upper Region encompasses the area south of Bayou Sorrel to Old River and east of Grand Lake to the Gulf Intracoastal Waterway. It covers an estimated 72,143 acres. This area has only a few flow restrictions preventing water from entering and circulating throughout a large portion of the area, and the highly channelized flow of water through the School Board Canal (Unnamed Canal), Indigo Bayou, Salt Mine Bayou, Williams Canal, Bayou Pigeon, and the Coon Trap creates a sediment delivery network that carries sediment deep into the area, promoting further restriction of flow and isolation of small areas. Hydrologic restoration of the area requires modifying this network of channelized water inputs.

Ownership of the area is a mix of public and private land, so completing landscape-scale hydrologic restoration requires cooperation among landowners. Lack of cooperation had caused the project to stall, but in 2015 The Nature Conservancy (TNC) acquired specific tracts that are needed to provide critical water inputs, and the project is now moving forward through a partnership between ABP and TNC. In December 2015, DNR and TNC signed a Memorandum of Understanding to formalize this partnership.

A map of the East Grand Lake area can be found online at *www.basin.la.gov.*



Proposed project features in the EGL Upper Region.

Status Report

A robust monitoring program has been initiated by TNC. This monitoring program includes a combination of continuously recording instrumentation and discrete monitoring stations to determine the change in water flow patterns resulting from restoration. The program will also track the corresponding effects on water quality, habitat, forest health, biodiversity, and carbon and nutrient sequestration during flood and drainage events.

Design and permitting for phase 1 of project construction is underway and includes a suite of elements designed to restore healthy flow patterns in the EGL Upper Region. As the project progresses, there will be ample opportunities for public input at TAG and Research and Promotion Board meetings, which are held throughout the year. Additionally, the ABP holds public meetings annually to receive input on the annual plan.

Current funding for this project was reallocated from projects that were unable to proceed including Cocodrie Swamp and Pigeon Bay. A portion of the funding received in 2017 will also be allocated to this project.

Flat Lake

Flat Lake Study (201501)

Sedimentation is causing loss of access and aquatic habitat in Flat Lake and is detrimental to the overall health of the ecosystem. Sediment accumulation in Flat Lake exacerbates drainage issues and stagnation of interior swamp habitat throughout the Upper Belle River WMU. This study is an evaluation of the lake and its ecosystem to support the design of a restoration project to rehabilitate habitat, improve biological conditions, and re-establish access for the benefit of public use.

The "Overview and Planning Process of the East Grand Lake Water Quality Improvement and Sediment Management Plan" (2010) clearly identified the Flat Lake area as an important component of the drainage of the East Grand Lake and Upper Belle River WMUs. The study concluded that the hydrodynamic influence of Flat Lake should be quantified as part of the planning process and suggested that decisions regarding the future management of the waterways in and around Flat Lake will have a significant influence on the hydrology and ecology of the Western and Upper regions.

Because of its proximity to Coastal Master Plan projects designed to build wetlands in Terrebonne Parish, Flat Lake is an appropriate location for a demonstration project for utilizing Atchafalaya Basin sediments as a borrow source. This study will include analysis of lakebed sediments and will provide that and other information to support collaboration with CPRA.

Status Report

A portion of funding received in 2017 will be allocated to this project.

Depth Restoration at Entrance to Murphy Lake (201512)

Sediment has closed off access to Murphy Lake in the East Grand Lake WMU in low water conditions, causing water circulation and water quality problems. The project would involve dredging sediment accretion from the entrance of Murphy Lake to improve access and water flow into the lake.

Status Report

This project is not currently funded, but funding is being requested in the FY 2019 Annual Plan process.

Buffalo Cove Water Management Project

The Buffalo Cove Water Management Project is a project of the U.S. Army Corps of Engineers (USACE). It was designed to improve water circulation and sediment management in the Buffalo Cove Water Management Unit in an effort to enhance fish and wildlife resources. The project includes the improvement of interior circulation within the swamp; the removal of barriers to north-south flow; the input of oxygenated, low temperature river water; and the prevention or management of sediment input into the interior swamps.

This Buffalo Cove WMU element at Bayou Eugene was repaired after the flood of 2011

The project location is the lower Basin in Iberia, St. Martin and St. Mary Parishes. USACE began construction on Buffalo Cove in 2004, and the project was estimated to benefit more than 7,500 acres initially and 53,000 to 58,000 acres eventually.

Initially constructed Buffalo Cove elements included Bayou Eugene and elements 1, 6, 7, 8, 9-1, and 9-2. Some of these elements were impacted by unprecedented high water during the Mississippi River Flood of 2011 and were no longer functioning as designed. The following elements were repaired as of February 2013: 6, 7, 9-1, 9-2, and elements within Bayou Eugene (E1, E2, and E3). In 2016, the USACE began construction on elements 3, 12, 14, and 16 to further improve interior flows, and with the completion of those elements in June 2016, the project was considered substantially complete.

Status Report

Element 10 (Logjam), which was a late addition to the project design, still remains to be constructed. Element 10 was designed to improve a historic flow corridor of approximately 2.9 miles in the south/central Buffalo Cove WMU. It includes construction of cuts in hydrologic impoundments, which have been caused by the spoil banks of two oil and gas canals and one impoundment caused by sedimentation along a ridge. This project element was added to improve hydrologic connection between Buffalo Cove Lake, the Ice Box, and areas further downstream to the Atchafalaya River. In order to construct the proposed cuts, an existing access channel (Bayou Bieber) will be partially improved from Poncho Chute and a 100 foot portion of the access channel will be backfilled to preexisting conditions in order to maintain the existing channel capacity. The Atchafalaya Basin Program has set aside a portion of the funding received in 2017 to provide the State's 25% cost-share for Element 10.

Once Buffalo Cove WMU is completed, the State of Louisiana is obligated to provide 25% of ongoing operation and maintenance funding for this project, for which funding is being requested through this 2019 Annual Plan process.

View project information online at
www.basin.la.gov

Other Projects

Butte La Rose Boat Launch

This project was proposed in the State Master Plan in 1998 and involves upgrading the Butte La Rose Boat Launch at the Atchafalaya River by extending the launch an additional 15 feet into the river to accommodate safe launching when the river falls below three to four feet at the Butte La Rose gauge. The parking lot will also be improved.

This project is anticipated to be completed in 2017.

Butte La Rose Boat Launch

Grand Avoille Cove Boat Launch

Upgrades to this landing were proposed in the FY 2017 Annual Plan process. Recommended improvements include an upgraded boat launch and improved parking.

Sandy Cove Landing

Upgrades to this launch were proposed in the State Master Plan. Improvements to the existing launch are proposed. Improvements to the parking area, lighting, restrooms and a fishing area, as well as other improvements, are also proposed.

Bayou Plaquemine Boat Launch

Bayou Plaquemine is a historic natural waterway and former distributary of the Mississippi River into the Atchafalaya Basin. At one time, poor water quality limited public designated uses such as fishing, swimming, and other water recreation activities. Efforts by the City of Plaquemine, Iberville Parish Council Office, and the Atchafalaya Basin Program have successfully rehabilitated Bayou Plaquemine so that it now supports public designated uses. As a result, public demand for access into Bayou Plaquemine is increasing.

Improvements will include lengthening the existing concrete boat launch to allow launching boats in lower water conditions and improving access to Bayou Plaquemine.

Bayou Plaquemine Boat Launch

Cajun Coast Welcome Center Trail

This project will include construction of boardwalk behind the Cajun Coast Welcome Center in St. Mary Parish to provide a trail through the scenic cypress-tupelo swamp. It will also include informational signage to explain flood protection and its relation to the floodway.

Map of FY 2019 Project Locations

Atchafalaya Basin GeoTrail

The Atchafalaya Basin Geotrail is a series of 24 geocaches that have been placed in and around the Atchafalaya Basin. Launched on June 30, 2017, each site highlights an important feature that explains how water has influenced the region. The first 200 geocachers to complete the Atchafalaya Basin Geotrail Series are eligible for a limited edition Atchafalaya Basin Coin, shown here.

Visit www.basin.la.gov to get started.

Ongoing Activities

Connecting Atchafalaya Sediment Resources to the Needs of Coastal Communities

Bridging the gap between sediment-deprived and sediment-burdened areas of the Louisiana coast is a much-needed strategy to support restoration efforts in both the Atchafalaya Basin and the Louisiana coast. Approximately 21 percent of the total suspended load and 50 percent of sands in the Atchafalaya River are sequestered within the Atchafalaya Basin and do not reach the coast where they are needed. Ongoing rapid and detrimental sedimentation in the Atchafalaya Basin fills swamps and waterways, impairs water quality, and degrades habitats. Conversely, areas of the Louisiana coast outside the Atchafalaya Basin protection levees are experiencing erosion and subsidence and are in need of sediment sources for restoration projects.

The Atchafalaya Basin Program (ABP) continues to collaborate with the Louisiana Coastal Protection and Restoration Authority (CPRA) to better coordinate restoration efforts between the two agencies and to improve beneficial use of dredged sediments. This Annual Plan includes a study of Flat Lake that will inform decisions about its potential use as a borrow source for coastal projects.

Auditor Recommendations

The Louisiana Legislative Auditor's office completed an audit of the Atchafalaya Basin Program and made recommendations as to how the ABP can improve its administration of water management projects.

Recommendation 1: ABP should have Technical Advisory Group (TAG) review and approve water management projects after engineering specifications are developed to further ensure that the project's final design will achieve its intended goal(s) and so that stakeholders will know the details of projects before they are constructed.

Recommendation 2: ABP should consult with TAG on each water management project to determine if monitoring is necessary and, if so, work with TAG to develop the specific monitoring requirements. ABP should report monitoring results to TAG, the Research and Promotion Board and in its annual plans.

Recommendation 3: The Department of Natural Resources should, upon consultation with the Legislature, determine whether there is a need to extend and revise the Master Plan for the Atchafalaya Basin to better address the current needs and environment of the Atchafalaya Basin and better guide the Program in its administering of water management projects.

ABP agrees with all three recommendations and will develop a formal protocol to implement recommendations 1 and 2. We will encourage the Legislature to consider recommendation 3.

More information on project monitoring is available at www.basin.la.gov.

Spoil Bank Study

In the 2017 Regular Session of the Louisiana Legislature, the Louisiana Senate passed a resolution (SR 154) to urge and request the Department of Natural Resources (DNR) to study potential solutions that may mitigate spoil banks. This resolution was brought about by a concern that the lower Atchafalaya Basin has been adversely impacted by spoil banks that block natural water flows.

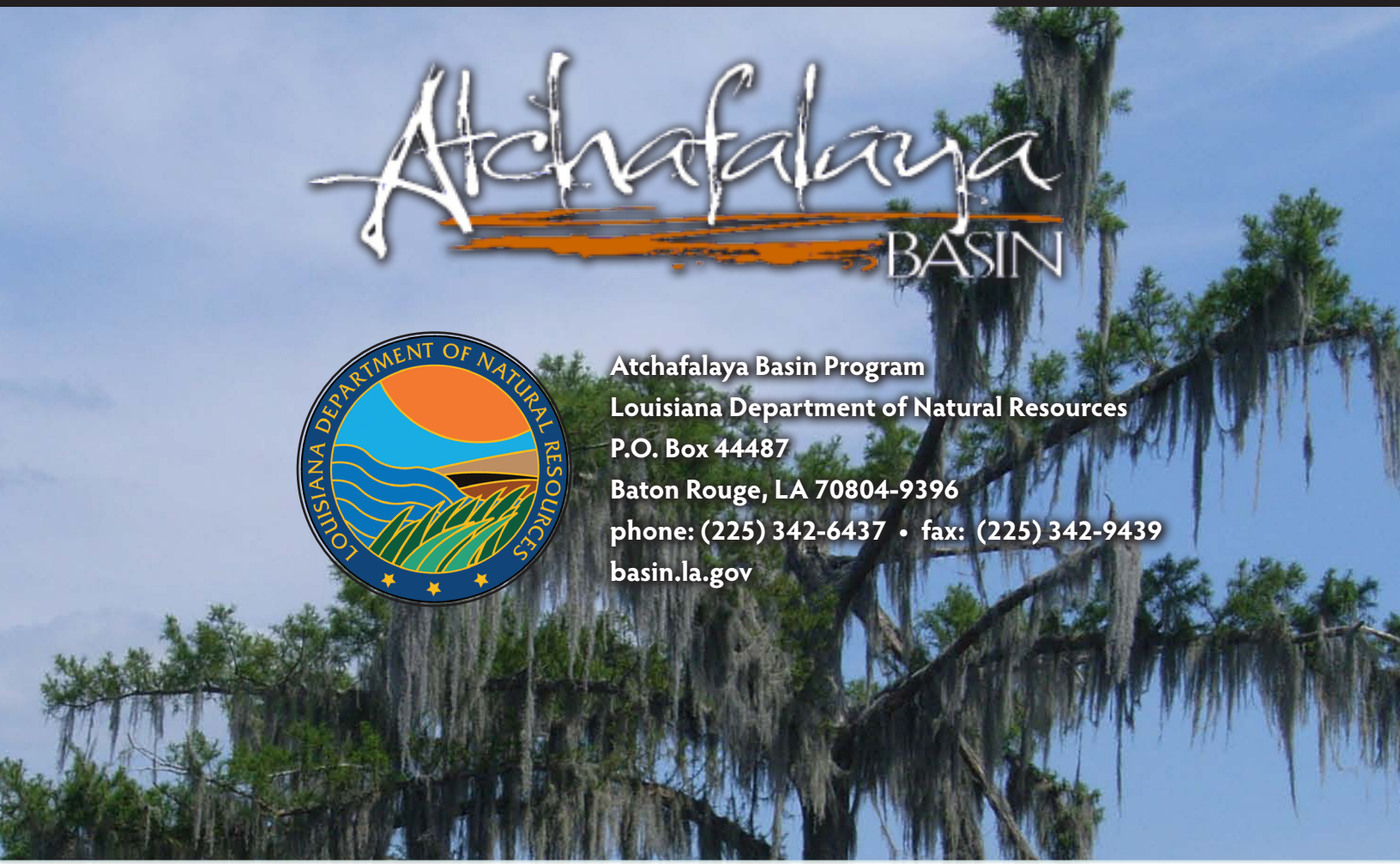
SR 154 requested that this study determine:

- Whether any spoil banks are adversely affecting fishing activities.
- Whether the spoil should be placed into the water bottom or removed off site to an approved location such that there be no remaining spoil bank.
- Whether the pipeline should be removed at the end of its useful life.
- Whether any construction, maintenance, or any other work should be permitted between the East Atchafalaya Basin Protection Levee and West Atchafalaya Basin Protection Levee.
- Whether permits for new pipelines should be granted to companies that are out of compliance with prior issued permits, until such time as those previously issued permits are brought back into compliance.

SR 154 directed DNR to provide a report to the Senate Committee on Natural Resources no later than February 1, 2018 that includes the number and location of spoil banks between the guide levees and the name of the pipeline company associated with the spoil bank and the approximate date the pipeline was constructed. DNR provided recommendations to the Senate Committee on Natural Resources by the February 1, 2018 deadline.

The following entities were requested to participate:

- United States Army Corps of Engineers
- Louisiana Coastal Protection and Restoration Authority
- Atchafalaya Basin Research and Promotion Board
- Sierra Club Delta Chapter
- Louisiana Crawfish Producers Association West
- Atchafalaya Basinkeeper
- Louisiana Landowners Association
- Louisiana Mid-Continent Oil and Gas Association
- Louisiana Department of Wildlife and Fisheries
- Louisiana Association of Business and Industry
- Louisiana Department of Natural Resources, Office of Conservation, Division of Pipeline Safety
- Office of State Lands
- Louisiana Department of Justice, Natural Resources Division
- Louisiana Oil and Gas Association
- A crawfish wholesale buyer located on the east side of the Atchafalaya Basin



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Additional Atchafalaya Basin Program FY 2019 Annual Plan documents available at www.basin.la.gov.

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