

# **LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES**



**OFFICE OF FISHERIES  
INLAND FISHERIES SECTION**

**2021 AQUATIC VEGETATION CONTROL PLAN**

**BLACK BAYOU LAKE (CADDO PARISH)**

## Waterbody History

Date Lake Formed – Originally impounded in 1945 covering 1,950 acres. Lake level raised four feet in 1955 to include current surface area of 3,960 acres.

## Waterbody Information

Waterbody Type – Impounded swamp, heavily forested with bald cypress (*Taxodium distichum*) and water tupelo (*Nyssa aquatic*).

Parish – Caddo Parish near the town of Hosston

Age and condition of control structure – approximately 65 years old, gates in poor condition, but operable. Erosion concerns from the outflow pipe under Highway 2 prevent operating the gates at this time. LADOTD has plans to alter the structure in 2021 if funding is available so that it can be operable once again.

Type of control structure – timber sheet piling weir spillway

The principal spillway crosses the embankment at latitude 32° 52' 54" N and longitude 93° 53' 55" W.

From the intersection of LA Highway 1 and LA Highway 2 in Vivian, Louisiana, proceed 5.7 miles easterly on LA Highway 2 to the west end of the embankment.

### *Description of Dam*

Black Bayou Dam consists of an earthen embankment approximately 1,400 feet in length, including the 400-foot wide principal spillway. The spillway weir is about 150 feet north of the LA Highway 2 Bridge over Black Bayou. There are two 48-inch diameter sluice gates upstream of two 60-inch diameter CMP drawdown pipes, about 200 feet east of the principal spillway.

Dam height is 20 feet. Structural height is 36 feet. Hydraulic height is 29 feet.

Maximum discharge is 19,600 cubic feet per second. Maximum storage is 46,500 acre-feet.

Normal storage is 17,750 acre-feet. Surface area is 3,960 acres.

Drainage area is 231 square miles.

Water level (MSL) – 183' MSL at normal pool stage. Normal seasonal water level fluctuations from approximately 182' MSL to 185' MSL

Surface area – 3,960 acres at normal pool stage, normal water level fluctuations do not greatly alter the surface acreage due to shoreline contour.

Average depth – 4.4 feet at normal pool stage Watershed ratio – 37:1

Drawdown Potential of structure – Maximum drawdown capability is limited to six feet below normal pool stage by bottom contours of the lake.

## Lake Commission – Black Bayou Watershed Commission (BBWC)

Creation / Nomination – The Black Bayou Watershed Commission was created by state statute (See Appendix I). Members are appointed by the Caddo Parish Commission.

### Commission Members:

Name	Address	Phone #	Term Expires
David Hale	1580 Northeast Front Street Vivian, LA 71082	(318) 464-3104	8-14-2022
Elmer E. Moreau	711 North Spruce Street Vivian, LA 71082	(318) 375-5988	8-14-2022
Charles Reynolds	102 Shelton Street Vivian, LA 71082		8-14-2022
Ronnie Festavan (President)	PO Box 667 Vivian, LA 71082	(318) 347-6442	8-14-2022
Charles Dennis Barr	104 General Lee Dr. Vivian, LA 71082		8-14-2022

Procedure for spillway openings – DOTD is responsible for operation and maintenance of control structure, spillway and dam. Lake management drawdowns require approval of the LDWF Secretary who may then forward the request to the Secretary of DOTD for operation of the control structure. Drawdown recommendations by LDWF are presented to the lake commission for concurrence prior to implementation.

What significant stakeholders use the lake?

Black Bayou Lake is primarily used by anglers, duck hunters, and lake shoreline residents.

What are their needs and concerns?

Historically, anglers have complained of dense submersed aquatic vegetation impeding navigation and causing damage to trolling motors and outboards. The majority of fishing was conducted in the winter and early spring before the submersed vegetation topped out. The dense vegetation made access to and from shoreline property difficult for lake residents. The aquatic vegetation in Black Bayou Lake has been a strong attraction to waterfowl during the winter months. As a result, the lake has been very popular with waterfowl hunters. Unfortunately, there is conflict in user group opinion regarding the importance of aquatic vegetation to lake management. There is also user group conflict in the role and timing of water fluctuation as a management tool for Black Bayou Lake.

Since 2012, giant salvinia (*Salvinia molesta*) has expanded and replaced the submersed

vegetation as the dominant problem on the lake. Salvinia has the potential to severely affect all of the recreational opportunities on the lake throughout the year.

What is the history of aquatic vegetation complaints?

Aquatic vegetation complaints are chronic. Historically, only minimal relief from submersed vegetation such as hydrilla (*Hydrilla verticillata*), fanwort (*Cabomba caroliniana*), bladderwort (*Utricularia spp.*) and coontail (*Ceratophyllum demersum*) was achieved with typical fall / winter drawdowns. At times, water hyacinth (*Pontederia crassipes*) and duckweed (*Lemna spp.*) impact boating and fishing access on the lake. Summer drawdowns were later utilized and provided positive results with several seasons of control being realized, and a positive effect on the fisheries resources of the lake from the drying action to bottom sediments and the production of crayfish species as forage. Submersed vegetation at times covers nearly the entire lake except for the main channel. Floating vegetation is most problematic in the timbered areas of the lake and along the shoreline. Since 2012, the entire lake has been impacted by giant salvinia.

Have there been any controversial issues on the lake?

1. The primary issue has always been aquatic vegetation problems, and the main controversy has been the frequency and timing of drawdowns. Waterfowl hunting is impacted by fall / winter drawdowns, as access can be restricted to popular hunting areas. Waterfowl hunters generally do not have a favorable view of a fall / winter drawdown on Black Bayou Lake. The Black Bayou Watershed Commission has not always supported drawdown proposals.
2. Ownership of the lakebed is another issue on this lake. In the past, such issues as duck blind construction, timber harvest and boat passage over portions of the lakebed, which are privately owned, have been discussed. Several property owners within the watershed district have attempted to restrict recreational use of the lake where they owned the water bottom. This issue is still unresolved.

## **Aquatic Vegetation Status:**

### ***Problematic species:***

Submersed aquatic vegetation coverage has historically been severe on Black Bayou Lake. Primary species include coontail, fanwort, and hydrilla. Hydrilla has expanded its range since its introduction sometime around 2001 near the boat ramp on the south end of the lake. Hydrilla was the biggest problem, covering approximately 90% of the lake prior to the abbreviated drawdown in 2012.

The lake has historically had problems with several species of floating plants including water hyacinth, duckweed, and watermeal (*Wolffia spp.*). Giant salvinia was first documented in 2007. Coverage of giant salvinia was kept in check by competition with the established aquatic vegetation, as well as with foliar herbicide applications until 2012. Following the abbreviated drawdown, giant salvinia out-competed other vegetation and became dominant even to the point of shading out much of the submersed vegetation on the lower half of the

lake. Floating vegetation is more prevalent in the more heavily forested upper end of the reservoir.

Emergent vegetation includes alligator weed (*Alternanthera philoxeroides*), water primrose (*Ludwigia spp.*), American lotus (*Nelumbo lutea*), and fragrant water lily (*Nymphaea odorata*). Emergent vegetation is generally most prevalent and problematic along the shoreline of the lake.

During 2013, giant salvinia became the dominant plant on the lake. In September of that year, a containment boom was stretched across the lake near where the tupelo forest begins. The boom was used to prevent large amounts of the salvinia contained in the heavily forested portion of the lake from entering the main lake. Fisheries habitat is highly degraded in this forested area and does not support a viable sportfish population. Dissolved oxygen levels are hypoxic most of the year in this area due to the large volume of organic substrate.

Since the installation of the boom, considerable herbicide efforts have been made, concentrating on giant salvinia in the main lake portion below the boom. This strategy has been successful in keeping the lower portion of the lake in a useable condition throughout the year. Since there are currently no drawdown capabilities on the lake, the lake would likely be totally covered with salvinia if this strategy were not implemented.

During a vegetation type map survey in September of 2020, it was estimated that aquatic vegetation covered approximately 75% (2,992 acres) of Black Bayou Lake. The vast majority of coverage was giant salvinia (approximately 2,917 acres). The upper end of the lake (1,700 acres) above the boom was solid. The coverage of giant salvinia below the containment boom was significantly increased from what had been observed the previous year. There were large mats of salvinia found in open water and the forested areas below the containment boom during this survey. It is likely that two mild winters in a row and minimum spray efforts due to budgetary concerns this year contributed to the increase of giant salvinia on the lower portion of the lake. Water pennywort (*Hydrocotyle spp.*), alligator weed, frog's bit (*Limnobium spongia*), water hyacinth and water primrose were found interspersed in the salvinia mats. In many areas, the mats have been in place long enough for Cuban bulrush (*Oxycaryum cubense*) to be growing on top of the mats, especially above the boom in the tupelo forest area of the lake. As in previous surveys, submersed vegetation has yet to return since the stocking of triploid grass carp (*Ctenopharyngodon idella*) and the expansion of giant salvinia.

### ***Limitations:***

The bottom contour of Black Bayou Lake is a major contributing factor to overabundant vegetation. Drawdown capability does not allow complete dewatering due to sedimentation near the control structure.

Fall / winter drawdowns have not proven to be successful in providing long-term control of nuisance aquatic vegetation. During a typical fall / winter drawdown, the lake will refill by mid to late November and remain at, or above pool stage during the remainder of the drawdown period. Summer drawdowns have provided better results for Black Bayou Lake.

## Past Control Measures:

Historic aquatic plant control efforts have included fall / winter drawdowns that have provided minimal short-term relief from nuisance aquatic vegetation.

Drawdown History of Black Bayou Lake from 1954 to 2020.

Date Opened	Date Closed	Depth Below Pool	Purpose	Results	Issues
Unknown Month / 1954	Unknown Month/ 1955	Unknown	Raising lake level 4 feet through construction of new spillway and increasing height of dam	Lake level raised 4 feet	Lake level raised to improve fishing and combat aquatic vegetation. Study by Lloyd Posey reports undesirable effects such as extensive coverage of submerged aquatic vegetation and adverse effects to the fish population and no appreciable benefits.
Unknown Month / 1961	Unknown	Unknown Lake was 3' below pool on 8/17/61	Work on spillway	Unknown	None known
7/19/1977	1/20/1978	Unknown (likely 6 feet)	Aquatic vegetation control – primarily <i>Egeria (Egeria densa)</i>	Poor	Correspondence on file vague concerning drawdown and results.
8/17/1979	Jan / Feb 1980	Unknown	Aquatic vegetation control	Poor	Correspondence on file vague concerning drawdown and results
Unknown Month / 1980	Unknown	Unknown	Unknown	Unknown	No information in files regarding this drawdown other than notes on August 1980 type map survey that said lake was “under drawdown condition” at the time of the survey.
6/1/1981	1/15/1982	Unknown (likely 6 feet)	Aquatic vegetation control	Unknown	Correspondence on file vague concerning drawdowns and results, but may have gotten relief for a couple of years from vegetation as there is a lack of correspondence until 1985

8/15/1985	2/1/1986	6 feet	Aquatic vegetation control – primarily Egeria	Poor – virtually no change in plant species and only slight decrease in density in some areas	Very mild winter in 85/86.
Fall/1986	2/15/1987	Unknown – likely maximum (app. 6 feet)	Aquatic vegetation control	Poor	Lake refilled and remained at or above pool stage during winter due to rainfall in the large watershed. Lake was 2.5 feet down and falling in May 1987 due to obstruction in one of the control gates.
6/1/1987	1/15/1988	Unknown – likely maximum (app. 6 feet)	Aquatic vegetation control	Good	Correspondence in files vague but indicates lake still in good condition in April 1991.
7/15/1995	10/15/1995	Unknown – likely maximum (app. 6 feet)	Aquatic vegetation control	Good	Lake still had not reached pool stage on 3/11/1996 due to the dry conditions.
6/1/2012	Proposed to remain open for 90 days after reaching target depth. Closed mid-June due to erosion concerns	Target level of 5 feet. Only reached 30-inches below pool	Aquatic vegetation control and bottom habitat improvement	Halted due to erosion under Hwy 2 at outflow pipe. Submersed vegetation was reduced the following year in areas where	When control structure was opened, land under Hwy 2 began to erode and forced the drawdown to be halted.

Foliar herbicide applications to emergent and floating aquatic vegetation along the inhabited shoreline areas have provided some relief to shoreline property owners. In past years, water hyacinth was one of the main problems, and applications of 2, 4-D (0.5 gal/acre) were made as time permitted and conditions warranted.

Recent aquatic plant control measures have included foliar herbicide applications for giant salvinia, along with limited herbicide applications for emergent and floating vegetation along the inhabited shoreline areas. In 2013, a containment boom was installed across the lake where the tupelo forest begins. LDWF spray crews concentrated efforts below the boom in the open portion of the lake. In November 2013, LDWF stocked 17,500



adult triploid grass carp at five per vegetated acre to aid with control of submersed vegetation. In addition, 61,020 salvinia weevils (*Cyrtobagous salviniae*) have been introduced into the lake to control giant salvinia. Stockings have been concentrated around the Noah Tyson boat launch.

From 2014-2020, most herbicide applications were concentrated below the boom and targeted salvinia. This strategy has been successful in that this portion of the lake has remained “useable” all year. Without the placement of the boom and with the lack of drawdown capabilities, it is likely the entire lake would be covered with salvinia similar to 2013.

In 2019, LDWF crews treated 145 acres of giant salvinia on Black Bayou Lake during six application efforts. Salvinia was treated with a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) or Flumioxazin (2 oz./acre) with Turbulence (0.25 gal/acre) surfactant. Herbicide efforts were greatly reduced in 2020 due to limited funding that did not allow for contract applications.

A containment boom was also placed around the public boat launch at Odom Park in 2013 to reduce the effects of salvinia on boaters loading and unloading vessels. This boom was somewhat successful, but its design required frequent maintenance. In 2016, LDWF collaborated with the BBWC, erected pilings, and purchased new boom that provides better protection for the launch area.

Salvinia weevil stockings in Black Bayou Lake for 2008-2020.

Year	# Weevils	Source
2008	500	LSU (Gheens)
2013	23,040	LSU (Gheens)
2017	37,480	LDWF (Iatt Lake)

### ***Discussion:***

Black Bayou Lake is a typical example of an aging eutrophic lake in that it has a significant accumulation of organic material on the lakebed from leaf litter and dead aquatic vegetation. The lake is in need of renovation actions that could provide for oxidation of the highly organic substrate. Giant salvinia has now expanded coverage in Black Bayou Lake. Mid-summer drawdowns on nearby Lake Bistineau have proven effective in managing giant salvinia and reducing organic substrate. At this time, a drawdown is not possible due to erosion issues with the outflow pipe. LADOTD has plans to repair the structure if funding is available.

### **Recommendations:**

Aquatic vegetation levels should be monitored on Black Bayou Lake in 2021. With the expansion of giant salvinia, it is likely that there will be a continued shift to more floating vegetation and less submersed vegetation. This survey, along with gill net sampling data, will also help to evaluate the success of the 2013 triploid grass carp stockings.

## Chemical Control

Foliar herbicide applications will continue to be conducted to control emergent and floating vegetation (primarily giant salvinia) in Black Bayou Lake in accordance with the approved LDWF Aquatic Herbicide Application Procedures:

<b>Plant Species</b>	<b>Herbicide</b>	<b>Surfactant</b>
<b>Salvinia spp. Alternative 1</b> Common/Giant Salvinia (April 1 to October 31)	Glyphosate (0.75 gal/acre) Diquat (0.25 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
<b>Salvinia spp. Alternative 2</b> Common/Giant Salvinia (April 1 to October 31)	Glyphosate (0.75 gal/acre) Flumioxazin (2 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
<b>Salvinia spp. Alternative 3</b> Common/Giant Salvinia (April 1 to October 31)	MSM (1 oz./acre) Flumioxazin (1 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
<b>Salvinia spp. Alternative 4</b> Common/Giant Salvinia (November 1 to March 31)	Diquat (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
<b>Salvinia spp. Alternative 5</b> Common/Giant Salvinia (November 1 to March 31)	Flumioxazin (12 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Water Hyacinth	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
Water Hyacinth in waiver areas (March 15 to September 15)	Glyphosate (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
Alligator Weed/Giant Cut Grass (undeveloped areas)	Imazapyr (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Alligator Weed/Giant Cut Grass (developed areas)	Imazamox (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
American Lotus	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
American Lotus in waiver areas (March 15 to September 15)	Glyphosate (0.5 gal/acre)	Nonionic surfactant (0.25 gal/acre)
American Lotus in waiver areas with potable water intakes (March 15 to September 15)	Triclopyr (0.5gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Duckweed	Diquat (1.0 gal/acre) or Flumioxazin (8 oz./acre)	Nonionic surfactant (0.25 gal/acre) or Turbulence (or approved equivalent, 0.25 gal/acre)
Cuban Bulrush (sedge)	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
Cuban Bulrush (sedge) in waiver areas (March 15 to September 15)	Glyphosate (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
Water Lettuce	Diquat (1.0 gal/acre) or Flumioxazin (6 oz./acre)	Nonionic surfactant (0.25 gal/acre) or Turbulence (or approved equivalent, 0.25 gal/acre)

## Biological Control:

Salvinia weevil stocking efforts have proven to be unsuccessful in northwest Louisiana to this point. Weevil stockings will be discontinued on Black Bayou Lake until a more cold-tolerant ecotype of weevil can be identified or created.

*Physical Control:*

Containment boom has proven to be an effective tool in Black Bayou Lake. The boom will continue to be utilized to contain floating vegetation in the upper portion of the lake. LDWF will move the boom as necessary for maximum efficiency. The boom will be removed when it is no longer necessary for vegetation control.

Replacement of the Black Bayou water control and outflow structures is recommended to facilitate water fluctuation. Plans are in place for LADOTD to make the necessary repairs in 2021 if funding is available.

Upon completion of the repairs to the control structure, the situation will be reevaluated to determine if drawdowns will be beneficial to control aquatic vegetation. At this time, it is unclear what the capabilities of the new structure might be. Additionally, the lake supports a healthy, trophy largemouth bass fishery that could be severely harmed by a drawdown of this shallow lake.

## Typemaps:

Vegetation type map surveys were conducted annually by the Aquatic Plant Control Section from 1980-1984, then 1988, 1990-1994, in 1998 and 1999. Inland Fisheries personnel conducted type map surveys in 2006, 2009, 2014, 2018, 2019, and 2020.

# BLACK BAYOU LAKE CADDO PARISH, LA VEGETATION TYPE MAP 2020

An aquatic vegetation survey was performed on Black Bayou Lake (Caddo Parish, LA) by Inland Fisheries biologist Holden Poole on September 14, 2020. The lake was approximately three inches below pool stage at the time of the survey, and the water was stained.

## Species Present

<u>Common Name</u>	<u>Scientific Name</u>
Alligator-weed	<i>Alternanthera philoxeroides</i>
Bulrush	<i>Scirpus</i> spp.
Buttonbush	<i>Cephalanthus occidentalis</i>
Cattail	<i>Typha</i> spp.
Cuban bulrush	<i>Oxycaryum cubense</i>
Duck potato	<i>Sagittaria latifolia</i>
Frog's bit	<i>Limnobium spongia</i>
Giant cutgrass	<i>Zizaniopsis miliacea</i>
Giant salvinia	<i>Salvinia molesta</i>
Lizard's tail	<i>Saururus cernuus</i>
Slender spike rush	<i>Eleocharis baldwinii</i>
Smartweed	<i>Polygonum</i> spp.
Torpedo grass	<i>Panicum repens</i>
Water hyacinth	<i>Eichhornia crassipes</i>
Water primrose	<i>Ludwigia</i> spp.
Wild taro	<i>Colocasia esculenta</i>

## Severity

Total coverage of aquatic vegetation on the Black Bayou Lake was approximately 2,992 acres or 75%. The vast majority of this is giant salvinia (approximately 2,917 acres), which can be categorized as severe coverage that is impeding traditional boating access. Water pennywort,

alligator weed, water hyacinth (approximately 30 acres), frog's bit and water primrose are found interspersed in the giant salvinia mats. All growth stages of giant salvinia were observed. Terrestrial vegetation such as Cuban bulrush was growing on top of much of the tertiary-stage salvinia in most areas of the lake.

The upper portion of Black Bayou Lake (approximately 1,700 acres) is heavily forested with bald cypress and water tupelo. A containment boom has been deployed across the lake at the lower end of the cypress / tupelo forest. The area of the lake above the containment boom is covered with giant salvinia except for occasional places in the main channel, where open water is seen.

The coverage of giant salvinia below the containment boom was significantly increased from what had been observed the previous year. There were large mats of salvinia found in open water and the forested areas below the containment boom during this survey. It is likely that two mild winters in a row and minimum spray efforts due to budgetary concerns this year contributed to the increase of giant salvinia on the lower portion of the lake.

Submerged vegetation was occasionally observed during the type map survey. Slender spikerush was the only submerged plant identified during the survey; and it was found in occasional, sparse patches in water 12 inches or less in depth. The terrestrial form of slender spikerush was observed occasionally growing on moist soil or other vegetation.

Giant cutgrass was the most prevalent species of marginal vegetation found around the lake. It was observed around much of the lake and was mostly restricted to the immediate shoreline. Other marginal vegetation included lizard's tail, buttonbush, smartweed, wild taro, cattail, torpedo grass and duck potato.

### ***Discussion***

Black Bayou Lake has historically had problems with both submerged and floating vegetation. Dense submerged native vegetation was replaced over time by water hyacinths or hydrilla, with giant salvinia becoming the dominant plant on the lake in 2013. Salvinia has all but eliminated submerged vegetation and water hyacinths on the lake.

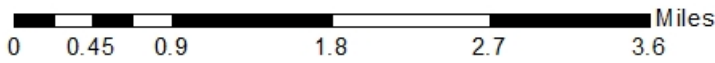
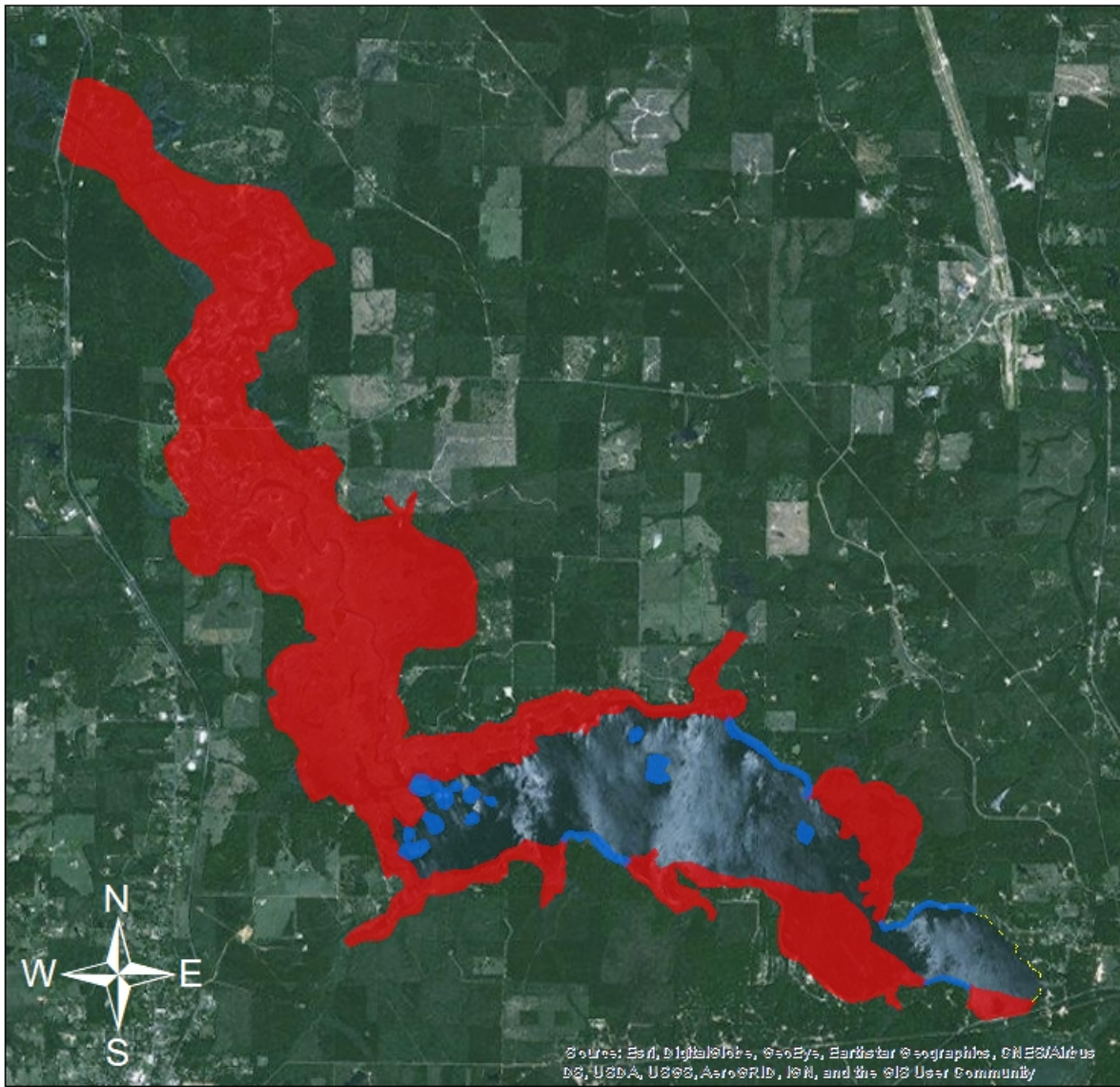
In an effort to control hydrilla and other submerged vegetation, 17,500 triploid grass carp were stocked into the lake in 2013. Since that time, submerged vegetation has not been problematic in the lake. Apparently, the combination of grass carp feeding and factors, such as muddy water and mats of giant salvinia, have kept submerged vegetation at minimal levels. However, only two grass carp were collected during 2019 gill net sampling, down from 89 collected during identical sampling effort in 2015. It appears that grass carp population is diminishing, and yet submerged vegetation has not rebounded.

In September of 2013, a containment boom was stretched across the lake near where the tupelo forest begins. The boom was to prevent large amounts of the salvinia contained in the heavily forested portion of the lake from entering the main lake. Fisheries habitat is highly degraded in this area and does not support a viable sportfish population. Herbicide efforts have been concentrated in the lower portion of the lake since the installation of the boom. Foliar herbicide

applications have been made to only 145 acres of giant salvinia thus far on Black Bayou Lake in 2020. That is greatly reduced from the 1,284 acres sprayed in 2019 due to a restricted budget. The coverage of giant salvinia above the boom is similar to what has been observed in previous years; however, the coverage on the lower portion of the lake below the boom has significantly increased. Two mild winters in a row and reduced spray efforts due to budgetary concerns contributed to the increase in giant salvinia.

At this time, drawdowns are not an option for the management of aquatic vegetation on Black Bayou Lake, due to a damaged outflow pipe and erosion concerns. The Department of Transportation and Development is awaiting funding for the repairs. The lake is a typical example of an aging eutrophic lake with significant accumulations of organic material on the lakebed. Summer drawdowns would be beneficial in providing for aerobic decomposition of the organic substrate and in the control of giant salvinia.




# Black Bayou Hosston Vegetation Coverage 2020



Map Created By: Holden Poole  
Date: September 22, 2020  
Datum: NAD 1983 UTM Zone 15N



## Legend

-  Light- 2 Acres
-  Moderate- 73 Acres
-  Severe- 2,917 Acres

## APPENDIX 1

## PART VIII. BLACK BAYOU WATERSHED DISTRICT

### §2821. Creation; location

The Black Bayou Watershed District is hereby created out of Black Bayou embracing the area north of the present Black Bayou dam situated and located on State Route 109 in Caddo Parish, the watershed of said bayou north of said dam and the area immediately south of said dam which is affected by said dam, which area is described as follows, to-wit:

All of the area presently comprising Ward 9 of Caddo Parish, all of that part of Ward 1 of Caddo Parish lying north of the following line, to-wit: Begin at the intersection of the East line of Ward 2 of Caddo Parish and the Belcher-Caddo City Road (State Route #530) thence run Easterly along said road to the Gamm Road, thence run Northerly along said Gamm Road to the North line of Section 26, Township 21 North, Range 15 West, Caddo Parish, thence run Easterly to the East Boundary of Caddo Parish, and all of that part of Ward 2 of Caddo Parish lying north of the following line, to-wit: Begin at the intersection of the Texas state line and the North line of Section 17, Township 20 North, Range 16 West, Caddo Parish, thence run Easterly to the East boundary of Ward 2 which is situated along the Clyde Place Canal.

Added by Acts 1966, No. 262, §1.

### §2822. District as political subdivision and budgetary unit; purpose

The Black Bayou Watershed District shall be a political subdivision of the State of Louisiana and a budgetary unit of the State of Louisiana, which shall have as its purpose the conservation of soil and water, developing the natural resources and wealth of the district for sanitary, agricultural and recreational purposes, as the same may be conducive to the public health, safety, convenience or welfare or of public utility or benefit. The maintenance of the Black Bayou Lake within the said district as hereinafter authorized shall be for the purpose of conserving the soil and water and developing the natural resources and wealth of the district for sanitary, agricultural or recreational purposes, as the same may be conducive to the public health or public utility or benefit.

Added by Acts 1966, No. 262, §2.

### §2823. Body corporate; powers

The Black Bayou Watershed District shall constitute a body corporate in law, with all the powers of a corporation, and with the powers and rights of a political subdivision of the state as provided by the laws of the state relating to the incurring of debt and the issuing of bonds therefor. This district, through its board of commissioners, may incur debt and issue negotiable bonds in accordance with the power and authority and in the form and manner, and with the effect and security now or hereafter provided by the Constitution and laws of the State of Louisiana. This district, through its board of commissioners, may incur debt and contract obligations in accordance with law, sue and be sued, have a corporate seal, and do and perform any and all acts in its corporate capacity and in its corporate name which are necessary and proper for carrying out the purposes and objects for which it is created. It shall have the power of eminent domain and may expropriate property for all its purposes and objectives. Through its governing authority, the district may conserve the fresh water supply within its boundaries for the benefit of the inhabitants and property owners within said district and state to provide water for commercial, municipal and any other uses, both within and without the district. It may construct, lease, maintain, acquire, enlarge and operate any machinery or do any other thing necessary for the use and purpose of the district. It may own in full ownership all servitudes, rights of way, flowage rights and may inquire same by donation, prescription, purchase, expropriation, or otherwise. It shall have the authority to cooperate and contract with the government of the United States or any department or agency thereof.



Added by Acts 1966, No. 262, §3.

§2824. Dam construction; board of commissioners created

The Department of Public Works is hereby granted the power and authority and is hereby directed to maintain present dams and to build and construct such other dams and works as may be necessary or beneficial to carry out the purposes of this Part and to create and impound an industrial water supply, in accordance with a survey and estimates to be made and established by the engineers of the said department. The Board of Commissioners of the Black Bayou Watershed District, with its powers and duties as defined herein, is hereby created and established for the purpose of aiding and assisting the said Department of Public Works during the actual construction stage and process of this project, and is established as the governing authority of said district after the completion of the construction process by the said Department of Public Works of the State of Louisiana.

Added by Acts 1966, No. 262, §4.

§2825. Board to govern; membership and tenure; vacancies; compensation

The said district shall be governed and controlled by the Board of Commissioners of the Black Bayou Watershed District, to be composed of five commissioners, each of whom shall be a qualified elector of the State of Louisiana who resides within the limits of Caddo Parish. The commissioners shall be appointed by the Police Jury of Caddo Parish and shall serve terms of four years and until their successors have been appointed and have qualified. Any vacancy in the office of commissioner, due to death, resignation, or any other cause, shall be filled by the remaining commissioners for the unexpired term.

The members of the board shall receive no compensation for their services. Added by Acts 1966, No. 262, §5.

§2826. Oaths

Before entering upon his official duties, each commissioner of the district created hereby shall take and subscribe to an oath before an officer authorized by law to administer oaths, that he will honestly, faithfully, and impartially perform the duties devolving upon him as a commissioner of said district and that he will not neglect any of the duties imposed upon him hereby. The oaths of the commissioner shall be recorded in the oath book of the parish of which said commissioner is a resident.

Added by Acts 1966, No. 262, §6.

§2827. Election of officers; record book; public inspection

Immediately after the commissioners have been appointed by the Police Jury of Caddo Parish, or as soon thereafter as practicable, the commissioners shall meet and immediately organize by electing officers as follows: They shall elect from among their number a president, who shall preside over the meetings of the board and perform such other duties as are usually required of presidents of corporate bodies, and also a vice president, who shall perform the duties of the president in case of his absence or disability.

The board shall cause to be kept a well-bound book entitled "Record Book of Black Bayou Watershed District", in which shall be recorded the minutes of all meetings, all proceedings, certificates, oaths of commissioners, bonds of employees and contractors, and any and all corporate acts. The records shall be in the possession of the secretary of the board and shall be open to public inspection at all times by any person interested.

Added by Acts 1966, No. 262, §7.

§2828. Powers of board

In order to accomplish the purposes for which the district is created, the board of commissioners may:

(1) Purchase, hold, sell and convey land and personal property and execute such contracts as it may deem necessary or convenient to enable it properly to carry out the purposes for which it is created.

(2) Acquire servitudes, rights of way and flowage rights, by purchase and/or by expropriation.

(3) Assist in conserving soil and water and in developing the water resources of the district; provided, however, nothing shall be done to interfere with districts previously organized under Louisiana law.

(4) Under the supervision of the Louisiana State Department of Public Works, contract for the construction of proposed works and improvements.

(5) Cooperate with the Department of Public Works in its construction of any drainage works or improvements, and the construction of any works or improvements for the control, retention, diversion or utilization of water; retard runoff of water and soil erosion, construct any ditch, channel improvement, dike, dam, or levee, and repair, improve and maintain any of said improvements or structures.

(6) Acquire personal property by gift or purchase.

(7) Levy taxes, issue bonds and incur indebtedness within the limitations prescribed by the Constitution of the State of Louisiana, and in the manner prescribed thereby.

(8) Cooperate and contract with persons, firms, associations, partnerships and private corporations, and cities of this state, or other public corporations and with any other local, state and governmental agencies for the sale or use of any waters impounded hereby.

(9) Select a domicile and home office for the district.

(10) Create, construct and administer such recreational parks, playgrounds and public picnic areas as the board may consider necessary and to provide access to any lake or reservoir created by the district for the use of the public.

(11) Do and perform any and all things necessary or incident to the fulfillment of the purposes for which this district is created, including all acts necessary to construct, lease, acquire in any manner, maintain, and operate dikes, dams, reservoirs, storage basins, locks, levees, flumes, conduits, spillways or other structures necessary, suitable or convenient to the purposes of the district.

Added by Acts 1966, No. 262, §8.

#### §2829. Rules and regulations

In order to accomplish the purposes of the district, to protect the works, improvements and property of the district, both real and personal; to secure the best results from the construction, operation, and maintenance thereof, and to prevent damage to the district by the misuse of any works, improvements or properties or by the pollution or misuse of the waters of the district or any water course therein, the board of Commissioners may make and enforce such rules and regulations as it shall deem necessary and advisable:

(1) To protect and preserve the works, improvements and properties owned or controlled by the district; prescribe the manner of their use by public corporations and persons, and preserve order within and adjacent thereto;

(2) To prescribe the manner of building bridges, roads, or fences or other works in, along or across any channel, reservoir or other construction of the district;

(3) To prescribe the manner in which ditches, sewers, pipelines or other works shall be adjusted to or connected with the works of the district or any water course therein and the manner in which the water courses of the district may be used for sewer outlets or for disposal of waste;

(4) To prescribe the permissible uses of the water supply, provided by the impoundment

constructed as hereinafter set forth and to collect therefor and the manner of its distribution and to prevent the pollution or unnecessary waste of such water supply;

(5) To prohibit or regulate the discharge into sewers of the district of any liquid or solid waste deemed detrimental to the works and improvements of the district;

(6) To coordinate and cooperate with the State Department of Public Works, and be guided by the plans and program of the said department, in the maintenance and improvement and/or construction by the latter of a necessary and adequate dam and impoundment on Black Bayou, Caddo Parish, Louisiana;

(7) REPEALED BY ACTS 1993, NO. 830, §2.

Added by Acts 1966, No. 262, §9; Acts 1993, No. 830, §2.

§2830. Department of public works; general powers

The Department of Public Works of the State of Louisiana is hereby authorized to do and to perform all acts necessary to construct, lease, acquire in any manner, maintain, and operate dikes, dams, reservoirs, storage basins, locks, levees, flumes, conduits, spillways and any and all structures necessary, suitable or convenient for the purpose of the construction and creation of Black Bayou Lake and the dam creating such lake located on or near the point where State Route 109 presently crosses Black Bayou in Caddo Parish, Louisiana in accordance with appropriate plans of the engineers of the said Department of Public Works and the survey or surveys made or to be made by the Department in connection with the creation and construction of the said Black Bayou Lake.

Added by Acts 1966, No. 262, §10.

§2831. Enumerated powers

In order to accomplish the purposes of the district and the creation and construction of the said lake, the State Department of Public Works is hereby authorized;

(1) To purchase, hold, sell and convey land and personal property and execute such contracts as may be deemed necessary or convenient to enable it to properly carry out the purpose of the construction of the said dam, spillway across said Black Bayou and the creation, control and organization of Black Bayou Lake;

(2) To acquire servitudes, rights of way and flowage rights, by purchase and/or expropriation;

(3) To assist in conserving the soil and water and in developing the water resources of the district;

(4) To contract for the construction of the proposed works and improvements;

(5) To construct any drainage works or improvements for the control, retention, diversion or utilization of water; retard runoff of water and soil erosion; construct any ditch, channel improvement, dike, dam or levee and repair, improve and maintain any of said improvements or structures;

(6) Acquire such personal property, by gift or purchase, as is necessary in the construction of said dam and the creation of the said Black Bayou Lake;

(7) To do any and all things necessary or incident to the fulfillment of the purposes of this Part.

Added by Acts 1966, No. 262, §11.

§2832. Execution of work; contracts; bond

The State Department of Public Works may execute any and all work with its own

force and equipment and under its own supervision or the work may be executed on behalf of and for the benefit of the said district by the State of Louisiana, or any agency, department or commission thereof by contract and the contract for all or any part of the work herein authorized may be let by the State Department of Public Works, with or without advertisement, on the terms and subject to the conditions which the said department may determine. The person or firm to whom the contract or contracts is awarded shall furnish, within the delay fixed by the Department of Public Works, a bond of a surety company authorized to do business in the State of Louisiana, in the amount required by the laws relating to contracts for public work, conditioned upon the faithful performance of the work in accordance with the plans and specification of the engineers of the State Department of Public Works and the terms of the contract. The Department may demand any other bonds and obligations which the laws relating to public works contracts require the contractor to give.

Added by Acts 1966, No. 262, §12.

§2833. Eminent domain

The State Department of Public Works is hereby granted the power of eminent domain and the right to expropriate any and all lands, flowage rights, servitudes, and rights of way necessary and convenient for the construction of the said dam, spillway, reservoir, storage basins, locks, levees, flumes, conduits, spillways or other structures necessary, suitable or convenient in connection with the construction thereof, as well as for the creation of the said lake, impoundment and reservoir within the boundaries as hereinabove set forth.

Added by Acts 1966, No. 262, §13.

§2834. Supervisory control over board

All the powers and duties conferred upon the Board of Commissioners herein shall be subject to the supervisory control of the Department of Public Works of the State of Louisiana and to the Wildlife and Fisheries Commission of the State of Louisiana or its successor, with jurisdiction by the latter over the fish, game and wildlife of the State of Louisiana and of the said Black Bayou Watershed District.

Added by Acts 1966, No. 262, §14.

§2835. Constructions impeding flow of waters prohibited

No person or public corporation shall erect within the drainage area of the district any dam or reservoir upon any stream or water course therein or any work or obstruction diminishing the cross section of any such stream or water course until a copy of the plans thereof has been filed with the Board of Commissioners and the State Department of Public Works, for approval or rejection by both.

Added by Acts 1966, No 262, §15.

§2836. Contracts let by board; bond

Subject to the supervisory control of the State Department of Public Works, any and all contracts of the district may be let by the board of commissioners, with advertisement, on the terms and subject to the conditions which it may fix in the ordinance or advertisement calling for bids. The person or firm to whom any contract is awarded shall furnish, within the delay fixed by the board, a bond of a surety company authorized to do business in the State of Louisiana, in the amount required by the laws relating to contracts for public works, and conditioned that the work shall be performed in accordance with the plans and specifications of the engineers of the State Department of Public Works, and the terms of the contract, and the board shall demand any other bonds and obligations which the laws relating to public works contracts require the contractor to give.

The board of commissioners and the State Department of Public Works may execute any

and all work with its own force and equipment and under its own supervision or the work may be executed on behalf of and for the benefit of the district by the State of Louisiana, or any agency, department or commission thereof.

Added by Acts 1966, No. 262, §16.

§2837. Playgrounds, parks and other facilities; limitation

The board of commissioners, under the supervisory control of the State Department of Public Works, shall have the power to cause to be created and constructed playgrounds, picnic grounds, grounds for recreation parks, and any and all other facilities to accommodate the public and to provide adequate access to the said lake, as may within the opinion of the said board become necessary but not to exceed two acres at any one place, and said district shall have the right of eminent domain and expropriation in the exercise of such powers.

Added by Acts 1966, No. 262, §17.

§2838. Attorney general as counsel

The attorney general of the State of Louisiana and his assistants shall be and are hereby designated as counsel for the State Department of Public Works and the said district in the execution of the purposes of this Part and are hereby charged with the responsibility of representing the said State Department of Public Works and the board of commissioners in any and all matters when called upon to do so.

Added by Acts 1966, No. 262, §18.

§2839. REPEALED BY ACTS 1993, NO. 830, §2.

§2840. Tax exemption

The lands which lie within and form the Black Bayou Lake proper shall not be subject to any ad valorem taxation or any other tax of any nature whatsoever by either the State of Louisiana or any of its political subdivisions, for so long as the said lands shall form and lie within the lake proper. All property acquired, however, regardless of the manner in which it is acquired or the source from which it is acquired, shall thereafter become the property of the State of Louisiana for the use and benefit of the Black Bayou Watershed District.

Added by Acts 1966, No. 262, §20.

§2841. Grant of state lands to district; right of mineral leases unabridged

All lands comprising the bed and bottom of Black Bayou belonging to the State of Louisiana within the said area, as provided in R.S. 38:2821, and which are necessary to the erection and maintenance of said Black Bayou Lake are hereby granted to the Black Bayou Watershed District for the purposes herein set out, but this grant shall in no wise abridge the right of the state to lease the said land for the production of oil, gas and other minerals under the general laws of the state as now provided.

Added by Acts 1966, No. 262, §21.

§2842. Individual mineral leases unabridged

The provisions of this Part shall in no wise abridge the right of any individual from whom the flowage rights, rights of way and servitudes may have been acquired by any means however to lease said lands for the production of oil, gas and other minerals and the right of such lessee or his assignee to produce or cause to be produced oil, gas or other minerals therefrom.

Added by Acts 1966, No. 262, §22.