LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

2018 AQUATIC VEGETATION MANAGEMENT PLAN

LAKE CLAIBORNE

Date Lake Formed – Project completed and gates closed in the fall of 1966. Lake reached pool stage on May 17, 1968.

Waterbody Type – upland reservoir created by earthen dam across Bayou D'Arbonne.

Age and condition of control structure – approximately 51 years, good condition
Type of control structure – spillway is a concrete circular drop inlet, 62' diameter at top (200' crest length); opening at bottom 30' diameter, spillway crest is set at 185 MSL. Three 9.5' x 14' concrete outlet conduits. The drawdown structure has two 8' x 8' sluice gates with an invert elevation of 151.2 MSL.

Water level (MSL) – 185 MSL at normal pool stage. Normal seasonal water level fluctuations from approximately 183.5 MSL to 187.5 MSL

Surface area – 6,400 acres at normal pool stage, normal seasonal water level fluctuations do not produce significant changes in surface acreage due to shoreline contours.

Average depth – 15.8 feet at normal pool stage

Watershed ratio – 13.3:1

Drawdown Capability – capable of complete dewatering

Lake Commission – Claiborne Parish Watershed District Commission
(CPWDC)

Creation / Nomination – The Claiborne Parish Watershed District Commission is created by statute. Members are appointed by the Claiborne Parish Police Jury.

LA RS - Title 38
PART IX. CLAIBORNE PARISH WATERSHED DISTRICT
§2861. Creation; location
The Claiborne Parish Watershed District is hereby created out of the watershed of all streams located in Claiborne Parish, and more particularly defined as all of Claiborne Parish, Louisiana.
Added by Acts 1966, No. 299, §1. Website -
http://cpwater.kcwd.com/5surface_water/surfwatr.html

Contact Information:

Claiborne Parish Watershed District Commission Mailing
Address: P.O. Box 266, Homer, LA 71040
Physical Address: 507 W. Main, Homer, LA 71040 (Police Jury Office Complex, Courthouse Square, Homer)
Hours: Phone Calls are answered M-F 7:30am-4:30pm Call to request a visit with a member of the commission.
Watershed District Office Clerk – Leigh Ann Jones
admin-asst.cppj@claiborneparish.org
Phone: (318) 927-5161

Claiborne Parish Watershed District Commission Mailing
Address: P.O. Box 266
Homer, LA 71040 Physical Address:
507 W. Main
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Claiborne Parish Watershed District Commission

Name	Contact Information
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Procedure for spillway openings – DOTD is responsible for operation and maintenance of the control structure, spillway and dam. Drawdown requests for lake management require LDWF Secretary approval. DOTD operates the control structure.

Drawdown history of Lake Claiborne from 1971 to 2017.

Year	Date(s)	Depth Below Pool	Purpose
1971	8/2 – 10/15	5 Feet	Bank stabilization, erosion control and shoreline improvements
1973	Unknown	8 Feet	Unknown
1975	8/1 – 1/10	8 Feet	Shoreline maintenance and improvements
1980	8/15 – 1/1	8 Feet (target depth) – actual depth in excess of 12 feet	Shoreline repair and improvements following high winds and water levels the preceding winter. (Broken pin on control structure caused level to drop to 12 feet below normal pool before repair. Lake level dropped further due to drought. Returned to pool 12/16/1982.)
1982	Unknown	5 Feet	Shoreline repair, decrease tannic acid from decaying timber. (information from Claiborne Parish Watershed Commission)
1987	Unknown	5 – 6 Feet	Shoreline maintenance and repair. Bids on repairs to control structure and levee. Secondary purpose – control infestation of slender naiad.
1990	9/5 – 12/30	4 Feet	Shoreline maintenance and repair.
1991	9/3 – 1/1	4 Feet	Shoreline maintenance and repair following high winds and water levels.
1996	9/3 – Unknown	5 Feet	Shoreline maintenance and repairs.
1999	9/7 – 1/17	3 – 4 Feet	Expose stumps for placement of navigation buoys.
2004	9/4 – 1/7	7 Feet (target depth)	Shoreline maintenance and repairs.

		Inadvertently dewatered over 9 feet.	
2007	9/17 – 12/2007	3 Feet	Expose stumps and obtain GPS coordinates for placing pilings for navigational purposes
2011	9/6 – 1/2012	7 Feet	Shoreline maintenance and repair. Inspection of dam and control structure, and maintenance work to culverts under Hwy. 2. Both gates fully opened on 9/25/11. Lake began slowly refilling in January 2012; reached pool stage 3/21/2012.
2017	9/7 – 1/15/2018	7 Feet	Scheduled drawdown, every 6th year, for shoreline maintenance. CPWDC dredged canal from Hwy. 2 public launch accessing the lake.

What significant stakeholders use the lake?
Recreational use of Lake Claiborne is primarily by anglers, recreational boaters, water sports enthusiasts, lake residents, and waterfowl hunters.

What are their needs and concerns?
The primary concern of shoreline residents is the aesthetic quality of their lakeside home sites. Aquatic vegetation rarely limits boating access.

What is the history of aquatic vegetation complaints?
Aquatic vegetation complaints are uncommon. Occasional complaints are received from shoreline property owners who reside in the backs of coves or other shallow areas. Their concerns are typically due to alligator weed and American lotus growth, and generally is aesthetic in nature.

Giant salvinia was first found in Lake Claiborne in 2008, and has been kept in control most years. LDWF receives few complaints regarding salvinia on the lake until late in the growing season. After salvinia has grown all year in the extremely shallow portions of the lake near the headwaters, early fall rains tyically flush the plants into the main lake where they become more visible. Complaint calls will be frequent for 1-2 weeks until the plants are dispersed by wind, wave, and herbicide treatments. These complaints have prompted the Claiborne Parish Watershed District (CPWD) to hire a contract applicator to supplement LDWF efforts. The contractor has been kept on retainer since 2014, but was not actually used to treat vegetation until 2017.

Have there been any controversial issues on the lake?
The main controversy on Lake Claiborne has been the frequency and timing of drawdowns. In order to reduce controversy, the Claiborne Parish Watershed Commission decided to have regularly scheduled drawdowns every six years. The first of these drawdowns began in September of 2011.

Aquatic Vegetation Status:

An assessment of the aquatic vegetation on Lake Claiborne was conducted by Inland Fisheries Biologist James Seales on July 21 & 24, 2017. The lake was approximately 4" above pool stage at the time of the survey. The water color was slightly stained and a moderate algae bloom was present throughout the lake.

The majority of Lake Claiborne was not adversely impacted by aquatic vegetation. Less than 7% of the lake had aquatic vegetation coverage that could be described as moderate or severe. The only areas negatively impacted were the extreme upper end of the lake and the upper reaches of the arms of the lake. These areas contained mats of giant salvinia, creeping water primrose, alligator weed, American lotus, and torpedo grass, along with a mixture of submersed vegetation.

Submersed vegetation was found along most shorelines and in some of the shallower areas of the lake. On the upper end of the lake, submersed vegetation could be found out to about the 6 feet contour. As the water cleared going down the lake, occasional plants were found out to about the 8 feet contour on the lower portion of the lake. Submersed vegetation found in these shallow areas included parrot feather, hydrilla, fanwort, coontail, eelgrass, muskgrass, widgeon grass, filamentous algae, and bladderwort. One large patch of hydrilla was noted in

the upper end of Beaver Creek, and other smaller patches were observed occasionally along the shoreline out to water depths of 6 to 8 feet. Approximately 100 acres of hydrilla was estimated to be on Lake Claiborne, and coverage was light to moderate in the areas where it was found. Other types of submersed vegetation were found in sparse to light coverage in most areas, and moderate in only a few places.

Giant salvinia was found primarily in the upper end of the lake. Most salvinia was mixed with emergent vegetation such as alligator weed or lotus, but some large mats were found in the calm pockets near the headwaters in the Beaver Creek arm. Occasional small mats of giant salvinia and individual plants were observed drifting in the open water areas of the lake, or drifted up against the shoreline further down the lake. Approximately 150 acres of giant salvinia were estimated to be on Lake Claiborne.

Marginal vegetation such as torpedo grass, giant cutgrass and wild taro were found intermittently along some of the undeveloped or less developed shorelines. The upper reaches of the lake and each arm had marginal vegetation in the extremely shallow areas.

Limitations:

Shallow water on the upper end of the lake makes herbicide applications for giant salvinia difficult. Salvinia has spread through a set of culverts under Hwy 2 and into a nearby ditch and borrow pit which cannot be accessed by conventional spray boats for herbicide applications. Pirogues and backpack sprayers must be used in this salvinia nursery area.

Past Control Measures:

Historic aquatic plant control efforts have been primarily foliar herbicide applications for emergent vegetation at the request of shoreline property owners on the upper end of the lake or in the backs of shallow coves. The treated vegetation was typically alligator weed and lotus which were sprayed with glyphosate (0.5 gal/acre) and a non-ionic surfactant (0.25 gal/acre). Giant salvinia was treated with a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre), with a non-ionic surfactant (0.25 gal/acre).

Controlling giant salvinia has been the primary focus of LDWF herbicide applications since 2008. Salvinia was first located near the Hwy. 2 boat launch and in the adjoining ditches and creek on the opposite side of the highway. LDWF efforts have focused on this location, utilizing backpack equipment and pirogues to access the area. Once salvinia was established in the main lake portion of Claiborne, most applications have been made from a boat with tank-mixed herbicides to keep salvinia isolated to the upper reaches of the coves. LDWF crews have used a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Turbulence (0.25 gal/acre) surfactant, or diquat (0.75 gals/acre) plus a non-ionic surfactant (0.25 gal/acre) to treat salvinia in recent years.

In 2014, the CPWDC partnered with Dr. Li of Stephen F. Austin University to sponsor an experimental treatment in the ditches adjacent to Hwy. 2. Dr. Li began treating the area in August 2014 with his experimental salvinia endocide. Following multiple treatments and physical removal of the plants to conduct the treatment, live viable salvinia plants remained in approximately 25% of the ditch by December. By early summer of 2015, the ditch was again covered with salvinia. The CPWDC again partnered with Dr. Li and allowed him to

experiment in the ditch. The second year's treatment offered similar results, but the ditch was again covered in early 2016. Once again, the CPWDC partnered with Dr. Li in 2016 & 2017 to allow him to experiment with new formulations in the ditch area.

In 2017, LDWF spray crews treated 25 acres of aquatic vegetation during 4 applications prior to the scheduled drawdown of the lake in September. These infestations were treated with a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Turbulence (0.25 gal/acre) surfactant. The CPWDC began using their contracted herbicide applicator in July, 2017 to supplement LDWF's efforts. The contractor was paid to treat 40 acres per month, which was suitable to treat most of the areas that contained salvinia. RAC Field Services treated a total of 95 acres of salvinia using Diquat (0.25 gals/acre) mixed with RoundUp Custom (0.75 gal/acre) and Elite Supreme surfactant (0.25 gals/acre) prior to the drawdown beginning in September.

Giant salvinia weevils (*Cyrtobagous salviniae*) were first introduced into Lake Claiborne in 2017 to aid in the control of giant salvinia. The weevils were brought in from Iatt Lake in central Louisiana where the population of weevils overwintered two successive years in high numbers. This population may be exhibiting signs of cold-tolerance or may be a product of circumstance as the two previous winters were mild. The weevils were released near Hwy. 2 in an area that has harbored salvinia for several years.

Giant salvinia weevil stockings by LDWF in Lake Claiborne, LA 2017

Year	# Weevils	Source
2017	4,285	LDWF (Iatt Lake)

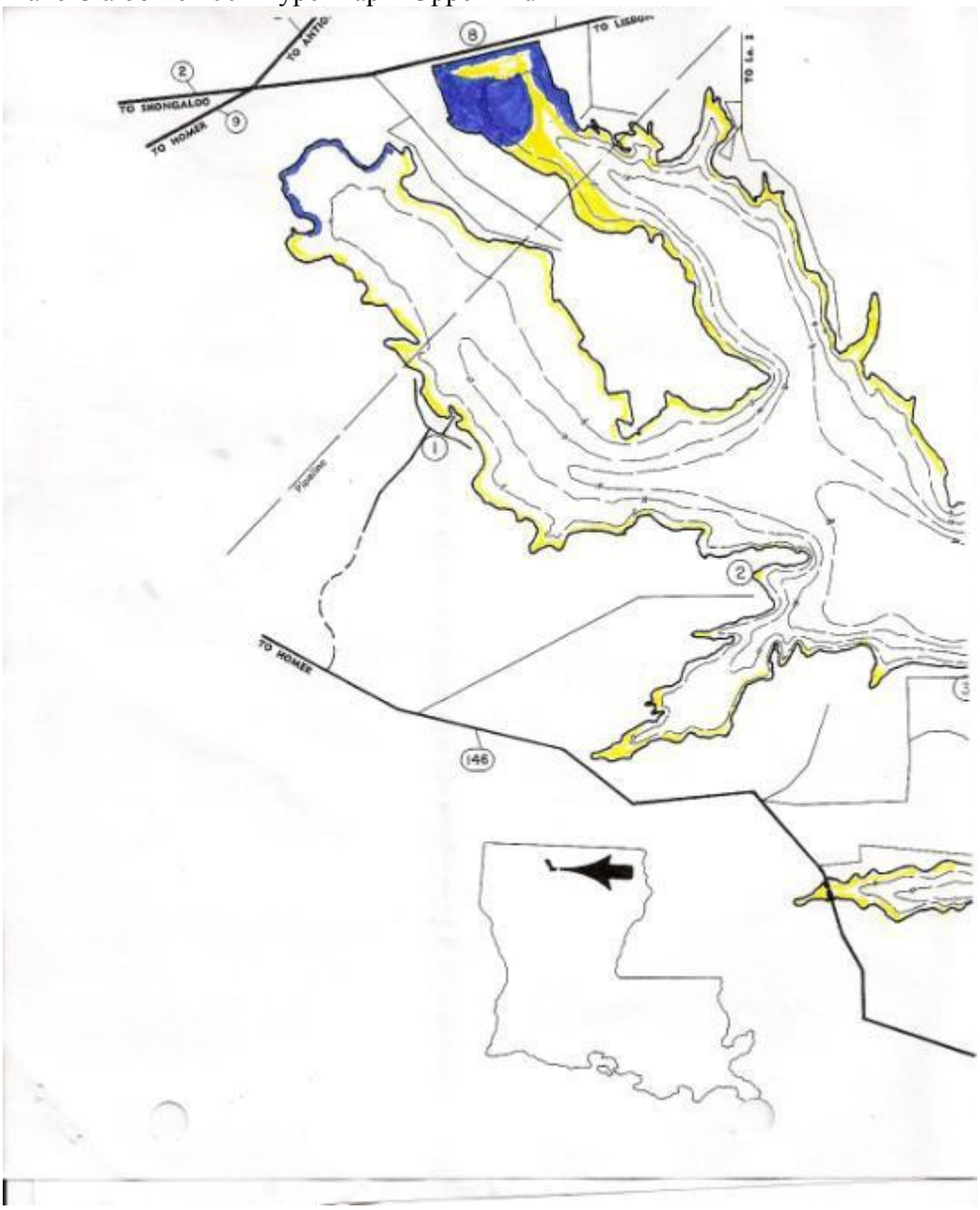
Recommendations:

Lake Claiborne will be treated on an as-needed basis for giant salvinia in accordance with the LDWF Aquatic Herbicide Application Procedure. LDWF crews will make monthly trips to treat the infestation on the lake and coordinate efforts with the CPWDC contract applicator. Efforts will be concentrated in the areas known to harbor salvinia in the three major coves of the west end of the lake without duplicating efforts with the contractor. Primary responsibility will be maintaining boating access from the Lisbon Landing public ramp off of Hwy 2. Foliar herbicide applications will be made using standard operating procedures for the control of giant salvinia as follows: Spray applications will be made with a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Turbulence (or approved equivalent, 0.25 gal/acre) surfactant from April 1 to October 31. From November 1 through March 31, diquat (0.75 gal/acre) will be used with non-ionic surfactant (0.25 gal/acre).

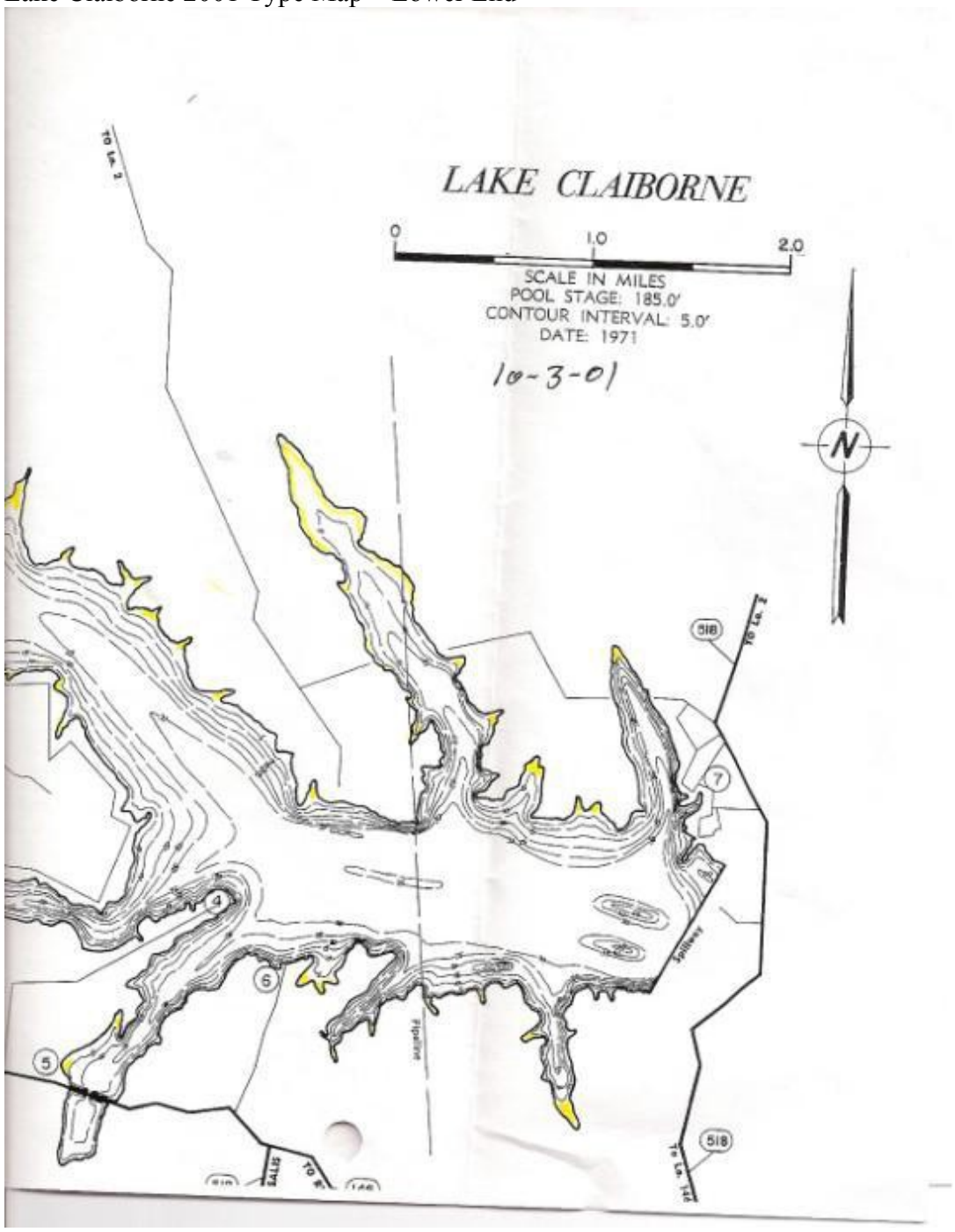
Typemap:

Vegetation type map surveys were conducted by Aquatic Plant Section personnel in the following years; 1980-1984, 1988-1995, and 1997-2001. Inland Fisheries personnel have not conducted type map surveys in recent years as Lake Claiborne does not have any significant aquatic vegetation problems other than the presence of giant salvinia.

Lake Claiborne 2001 Type Map – Upper End



Lake Claiborne 2001 Type Map – Lower End



LAKE CLAIBORNE

October 2001

Melvin Bagwell

Lake Claiborne was surveyed for the presence of aquatic vegetation on October 3, 2001. At the time of the survey the lake was at pool stage. The water color was slightly turbid.

The submersed plant noted were: Chara, filamentous algae, coontail *(Ceratophyllum demersum),* southern naiad *(Najas guadalupensis),* and *Eleocharis sp.*

The emersed plants noted were bulrush, smartweed *(Polygonum sp.)* and water primrose *{Ludwigia sp.).*

The estimated percent coverage of submersed plants was 5%.