

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

NANTACHIE LAKE

LAKE HISTORY & MANAGEMENT ISSUES

CHRONOLOGY

DOCUMENT SCHEDULED TO BE UPDATED EVERY THREE YEARS

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LAKE HISTORY

GENERAL INFORMATION

Date Reservoir Formed

Nantachie Creek was impounded in 1964 at an elevation of 95.0 feet Mean Sea Level (MSL) to create Nantachie Lake. In the winter of 1993, the water level in Navigation Pool 3 of the Red River was raised to 95.0 MSL. This prevented further use of the Nantachie Lake drawdown gate at Dam No. 1. The Nantachie Dam No. 2 (drawdown structure) was completed in 2005 to provide drawdown capabilities. To see dam locations see [Appendix I](#).

Impoundment

Ownership – State of Louisiana

Purposes for creation – The Lake was built to enhance wildlife & fisheries habitat and provide recreational opportunities for the citizens of the state.

Size

1,580 acres

Watershed

Drainage area is 84 square miles (ratio 32:1) of uplands consisting of mixed hardwood and pine land in Grant and Winn parishes.

Pool Stage

95.0 mean sea level (MSL)

Parish Located

Grant

Drawdown Description

Normal drawdowns for lake management must be accomplished through Dam No. 2. Due to downstream flooding of private property, the water level can only be lowered a maximum of two inches per 24-hour period. The maximum drawdown capability is seven feet below pool stage. With no rainfall in the watershed, it takes approximately six weeks to lower the water level seven feet.

Nantachie Lake Dam No. 1

The Nantachie Lake Dam No. 1 is an earthen embankment that has a 150-foot wide concrete spillway with an attached 150-foot wide earthen auxiliary spillway. It is 1,150 feet long with a dam crest elevation at 110 feet MSL. The spillway is located on the southwest corner of Nantachie Lake. There is a single 5' x 5' drawdown gate in the vertical face of the spillway wall. This structure can no longer be used to draw down the lake. The 150-foot wide concrete spillway still functions as an overflow spillway.

Dam height is 37 feet.
Structural height is 41 feet.
Hydraulic height is 32 feet.
Maximum discharge is 19,600 cubic feet per second
Maximum storage is 35,500 acre-feet.
Normal storage is 11,200 acre-feet.
Surface area is 1,580 acres.
Drainage area is 84 square miles.

Nantachie Lake Dam No. 2

Nantachie Lake Dam No. 2 is an earthen embankment that has a section of LA Highway 1240 along the crest. It has a crest elevation of 111.75 feet MSL. The embankment is 2,190 feet long. There is a concrete drawdown structure with a six-foot diameter drawdown slide gate that has an invert elevation of 83.5 feet MSL. This structure allows the lake to be dewatered.

Dam height is 29 feet.
Structural height is 29 feet.
Hydraulic height is 23 feet.
Maximum discharge is undetermined
Maximum storage is 35,500 acre-feet.
Normal storage is 11,200 acre-feet.
Surface area is 1,580 acres.
Drainage area is 84 square miles.

Outlet Works (Drawdown Structure-Dam No. 2)

The concrete drawdown structure has a 72-inch diameter drawdown slide gate at an invert elevation of 83.5 feet MSL. Water is discharged through a 220.5-foot long, 72-inch diameter embedded cylinder pipe. There is a concrete discharge structure with a stilling basing and an earthen discharge channel.

Who Controls

Dam No. 2 is located in the earthen dam underneath Hwy 1240, and is used to dewater Nantachie Lake. The structure was built in 2005 by the US Army Corps of Engineers (USACE). In a cooperative agreement with USACE, the Grant Parish Police Jury (GPPJ) committed to the maintenance of downstream crossings. The agreement is located in [Appendix II](#). In a separate cooperative agreement with the USACE, the Louisiana Department of Wildlife and Fisheries (LDWF) accepted ownership of the structure (Dam No. 2), and agreed to provide for the perpetual operation, maintenance, repair, and replacement of the structure. The complete cooperative agreement is located in [Appendix III](#).

Dam No.1 is owned, maintained, and operated by the Louisiana Department of Transportation and Development (LDOTD). Dam No. 1 can no longer be used to dewater Nantachie Lake. However, this structure remains vital to the lake. It maintains the lake water level at the pool stage of 95.0 M.S.L. and allows excess water to flow out of the lake.

Lake Authority

Legislative Act 858 of 1981 abolished the Nantachie Lake State Game and Fish Preserve and transferred their responsibilities to LDWF. Currently there is no existing lake board or commission. The LDWF works directly with the GPPJ. At a regular meeting of the GPPJ held on September 19, 1996 the Nantachie Lake Board was abolished. The same resolution included a request for LDWF to manage Nantachie Lake.

Primary contact information-

Grant Parish Police Jury
200 Main Street
Colfax, LA. 71417
Tel: 318-627-3157

Note – There is a self-organized group of concerned citizens: The Lake Nantachie Property Owners Association (LNPOA).

Contact information –

62 Martin Springs
Forest Hill, LA. 71430

Access

Boat Ramps

There are currently four public boat ramps on Nantachie Lake (Table 1). There are no amenities available at the ramps. All of the ramps are free to the public. Map with locations is found in [Appendix IV](#).

Table 1. Nantachie Lake public boat ramps and locations.

RAMP NAME	GPS COORDINATES	PHYSICAL CONDITION	COMMENTS
Public Boat Ramp	31.6052° N; -92.7782° W	concrete ramp	No Fee
IP Boat Ramp	31.6209° N; -92.8009° W	concrete ramp	No Fee
Whispering Pines Boat Ramp	31.6428° N; -92.8234° W	concrete ramp	minimal parking space, No Fee
Fletcher's Boat Ramp	31.6410° N; -92.8181° W	concrete ramp	No Fee

Piers

No public fishing piers are available. Numerous private piers are associated with homes and camps.

State/Federal Facilities

NONE

State/National Parks

NONE

Shoreline Development by Landowners

Approximately 50% of the shoreline is developed by private landowners with homes and camps. The majority of the undeveloped shoreline property is owned by timber companies. It is managed for timber production and is unavailable for development at this time.

Physical Description of lake

Shoreline Length

Approximately 22.5 miles

Timber type

Approximately 70% of the surface acreage in Nantachie Lake has visible dead timber above the water line. Bald cypress trees (*Taxodium distichum*) are located on the north end of the lake and around portions of the shoreline.

Average depth

Seven feet

Maximum depth

17 feet

Natural seasonal water fluctuation

Due to the large watershed, normal water level fluctuations of 1' to 2' are common. Water level fluctuations of 4' to 6' may occur on rare occasions.

Events / Problems

Historically, aquatic vegetation has been problematic in Nantachie Lake. Currently, hydrilla (*Hydrilla verticillata*) and giant salvinia (*Salvinia molesta*) are causing problems for recreational users of the lake, especially home and camp owners.

The completion of the Red River Navigation project in 1993 prevented future use of the Nantachie Lake Dam No.1 gate to dewater the lake. A control structure in Dam No.2 was constructed by USACE to alleviate this problem. This structure allows dewatering to approximately seven feet below pool stage. Before the Red River Project was implemented, Dam No.1 allowed for the lake water level to be lowered ten feet.

In the fall of 2010, the GPPJ and the LNPOA requested an opening of Dam No. 1 to allow Red River water to backflow into Nantachie Lake. The action was requested in an effort to raise the level of the impoundment to alleviate low water issues. An opening of Dam No. 2 was

also requested to provide irrigation water for farmers and ranchers downstream in Bayou Darrow. LDWF requested an opinion from DOTD on operation of Dam No.1 for back flow. In a recommendation against the action, DOTD explained that the structure was not designed for reverse flow and that there is no trash rack on the downstream side for protection. Obstruction of the gate opening was a concern. Operations to close an obstructed gate could cause extensive damage to the gate and structure. LDWF advised that the action carried long term risk for all Nantachie Lake users to attain short term gain for a small number of users and did not forward a request for the gate opening to DOTD.

On November 7, 2011, a joint agreement was signed by the GPPJ and LDWF. In the agreement, the GPPJ assumed liability and responsibility for all damages due to the operation of Dams No. 1 and No. 2. Nantachie Dam No. 1 was opened to allow Red River water to back flow into the impoundment. Dam No. 2 was opened to provide water for drought relief to downstream farmers and ranchers in western Grant Parish. See [Appendix V](#) to view the complete agreement.

On December 7, 2016, the GPPJ made a motion to open these structures for the purpose of increasing water flow for agriculture and recreational purposes in Bayou Darrow during periods of need. This proposal has been contested by many land owners surrounding the lake. A special meeting was held on January 17, 2017 and the GPPJ rescinded the motion.

In 2017, the possibility of using flow from Red River through Nantachie Lake to allow for downstream irrigation was being considered, again. NRCS was being funded to conduct a study on the best way of achieving irrigation to North Hydrologic Unit Code – 111402070807 and South Hydrologic Unit Code - 111402070807. At this time, there are two potential plans to achieve this. One is to flow water through Nantachie Lake. The other is conveying water from Nantachie Creek, near its confluence with the Red River, to Corfeine Bayou where it can provide water to the network of tributaries in the proposed area.

MANAGEMENT ISSUES

Aquatic Vegetation

Historically, Nantachie Lake has been plagued with aquatic vegetation. Two drawdowns to combat submersed aquatic vegetation (SAV) were conducted in 1974 and 1979. In the 1970's, native aquatic vegetation dominated shallow water areas of the lake. These SAVs included fanwort (*Cabomba caroliniana*) and bladderwort (*Utricularia* spp.). No emergent vegetation was reported as problematic during that time.

Hydrilla was first recorded in the lake in 1998 near the public boat launch on Highway 1240. By 2000, hydrilla was the most abundant SAV in the lake. Hydrilla growth was matted at the water's surface in the majority of water less than six feet deep. Since that time, hydrilla has been a constant problem on the lake. It limits access for anglers, recreational boaters, and

homeowners, and reduces the aesthetic value to residents. Drawdowns occurred for three consecutive years in 2005, 2006, and 2007 to reduce hydrilla. Success of the drawdowns varied, and hydrilla became established in deeper water areas that were not dried out during the drawdowns. This allowed the hydrilla to regrow quickly during the growing season following each drawdown.

By the fall of 2012, hydrilla was causing serious problems again. At this time, approximately 56% of Nantachie Lake was covered with hydrilla. The majority of waters out to the 8' depth contour were matted to the surface with hydrilla. In the fall of 2012, LDWF developed an aquatic vegetation plan that included a 4-foot drawdown in fall/winter of 2012/2013. The drawdown was followed with a stocking of triploid Grass Carp (TGC) in the spring of 2013.

When stocked at sufficient rates, TGC have proven to be effective at controlling SAV, especially hydrilla. Due to the short-term effectiveness of drawdowns as discussed above, TGC were introduced as a control measure. Two thousand TGC were stocked in Nantachie Lake on April 3, 2013. The 8" to 12" fish were stocked at a rate of four fish per vegetated acre. Annual vegetation surveys are conducted during summer months (July - August) to determine the success of the TGC at reducing hydrilla growth. Additional TGC introductions may be considered in the future, if necessary.

Giant salvinia (*Salvinia molesta*) was discovered in the lake in 2008. The invasive floating fern has not caused major problems to date. LDWF personnel conduct maintenance spraying two to four days each month to maintain control of giant salvinia in Nantachie Lake.

On October 9, 2013, less than 50 acres of giant salvinia were observed scattered throughout the impoundment. No major mats of the plant were present. A fringe of alligator weed (*Alternanthera philoxeroides*) and scattered water hyacinth (*Pontederia crassipes*) was present along the shoreline. Combined coverage of these species was less than 50 acres. Due to the fall/winter drawdown in 2012/2013, hydrilla was not causing problems.

Emergent vegetation, including giant salvinia, was less of a problem in 2014 due to colder than normal temperatures in January of that year. During this period, a thin layer of ice formed on shallow water areas of central Louisiana lakes. In 2015, nearly 800 acres of giant salvinia were treated in the lake, but it did not become a boating access problem (Table 2).

By August 7, 2016, the SAVs hydrilla and coontail had returned to the fringes of the shoreline out to around the 6-foot contour. Giant salvinia was present, but had not become a boating access problem as shown on the 2016 vegetation survey. Approximately 400 acres of giant salvinia were treated in the summer of 2016.

On August 14, 2017, the submersed vegetation was growing out to approximately the 8-foot contour. Giant salvinia was mainly located in the northern flat of the lake with scattered areas along the shoreline of other portions of the lake. Coverage at the time was approximately 100 acres of salvinia total. 447 acres of giant salvinia were treated in 2017.

August 2, 2018, the submersed vegetation was growing out to approximately the 6-foot contour.

The introduction of Red River water due to high river stages had reduced the growth of submersed vegetation mainly on the southern end of the lake. Coverage at the time was approximately 150 acres of giant salvinia. 190 acres of giant salvinia were treated in 2018.

September 4, 2019, the submersed vegetation was growing out to approximately the 6-foot contour. Another high water event introduced Red River water into the lake and reduced submersed vegetation on the southern portion of the lake. Coverage at the time was approximately 125 acres of giant salvinia. 298 acres of giant salvinia were treated in 2019.

Type map

A total of nine vegetation surveys (type maps) have been conducted on Nantachie Lake between 1974 and 2016. The surveys were conducted in 1974, 2005, 2006, 2007, 2012, 2013, 2014, 2015 and 2016. The 2016 vegetation survey (type map) can be viewed in [Appendix VI](#).

Biomass

No biomass sampling has been conducted.

Biological Treatments

Triploid grass carp (TGC) were stocked into the lake on April 3rd, 2013. The TGC were stocked at a rate of four fish per vegetated acre. A total of two thousand (2,000) carp between 8" and 12" long were released at the Whispering Pines and IP boat ramp sites.

Chemical Treatments

LDWF spray crews utilize foliar herbicide applications in response to complaints received from the public. Also, maintenance spraying is conducted two to four days per month, primarily to prevent the spread of giant salvinia. For a complete summary of herbicide applications see Table 2.

Table 2. Herbicide applications in Nantachie Lake, Louisiana from 2009 to present.

Year	Acres Treated	Vegetation
2009	9	Alligator Weed
	1	Salvinia, Common
	25	Salvinia, Giant
	27	Water Hyacinth
2010	151	Alligator Weed
	2	Salvinia, Common
	20	Salvinia, Giant
	15	Water Hyacinth
2011	78	Alligator Weed
	3	American Lotus
	5	Salvinia, Common
	64	Salvinia, Giant
	9	Water Hyacinth
2012	72	Alligator Weed
	21	American Lotus
	18	Water Primrose
	26	Salvinia, Common
	676	Salvinia, Giant
	240	Water Hyacinth
2013	39	Alligator Weed
	103	American Lotus
	19	Salvinia, Common
	702	Salvinia, Giant
	10	Water Hyacinth
2014	82	Alligator Weed
	14	American Lotus
	590	Salvinia, Giant
2015	791	Salvinia, Giant
2016	6	Alligator Weed
	392	Salvinia, Giant
2017	10	Alligator Weed
	447	Salvinia, Giant
2018	14	Alligator Weed
	10	Primrose
	190	Salvinia, Giant
	6	Water Hyacinth
2019	34	Alligator Weed
	298	Salvinia, Giant
	2	Water Hyacinth

Herbicide applications in the past have been applied at the following rates:

Glyphosate (Aquamaster, Aquastar, etc.): Used at a rate of 0.75 gallons per acre to treat alligator weed, water hyacinth, and giant and common salvinia during the active growing period.

Diquat (Reward, Tribune): Used at a rate of 0.75 gallons per acre to treat alligator weed, water hyacinth, and giant and common salvinia during the slower growing period or winter months.

Surfactant is added at a rate of 1:4 (surfactant: herbicide) for all herbicides.

Current herbicide applications for the treatment of giant and common salvinia are in accordance with the approved LDWF Aquatic Herbicide Application Procedures. Schedule and rates listed below:

April 1-October 31: glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Turbulence (or approved equivalent, 0.25 gal/acre)

November 1 – March 31: diquat (0.75 gal./acre) and a non-ionic surfactant (0.25 gal/acre)

Physical Controls

Nantachie Lake has been drawn down several times to control nuisance aquatic vegetation. The first scheduled drawdown was in 1974. The drawdowns that occurred in 2005, 2006 and 2007 provided short-term reductions in hydrilla biomass in shallow water areas. The 2012/2013 drawdown lowered the water level four feet. It was designed to reduce the biomass of hydrilla prior to the TGC stocking in the spring of 2013.

History of Regulations

Recreational

Statewide regulations for all fish species. The recreational fishing regulations may be viewed at the link below:

<https://www.wlf.louisiana.gov/page/seasons-and-regulations>

Commercial

The commercial fishing regulations may be viewed at the link below:

<https://www.wlf.louisiana.gov/page/seasons-and-regulations>

Drawdown history

A complete drawdown history is found in Table 3.

Table 3. Drawdown history of Nantachie Lake, Louisiana.

DRAWDOWN HISTORY				
Date Opened	Date Closed	Purpose	Results	Issues
1974	Undocumented	Vegetation Control	Undocumented	
1979	Undocumented	Vegetation Control	Undocumented	
09/08/1992	11/01/1992	Shoreline Maintenance	Undocumented	
10/10/2005	01/31/2006	Vegetation Control	Good	Benefits short-term
07/17/2006	11/14/2006	Vegetation Control	Limited	Unsuccessful excessive rainfall
07/16/2007	01/31/2008	Vegetation Control	Good	Benefits short-term
7/24/2012	1/14/2013	Hydrilla Control	Good	

Purpose

All drawdowns except the 1992 drawdown have been conducted to provide submersed vegetation control. The drawdown in 1992 was for shoreline maintenance. Drawdowns conducted since 2005 have primarily been for hydrilla control.

Success

Drawdowns have provided a reduction in hydrilla biomass in the shallow waters of the lake. Drawdowns since 2005 have been limited to a maximum depth of seven feet. This is the maximum drawdown depth allowed by the control structure. The benefits of the drawdowns are short-lived. Generally, regrowth occurs during the second growing season following the drawdown.

Fishing closure

The lake has not been closed to fishing during the drawdowns.

Depth below pool

The maximum depth below pool during a drawdown has been ten feet. Since 2005 the maximum depth attainable during a drawdown is seven feet.

Estimated % exposed

Approximately 35% of the lake bottom is exposed during a seven-foot drawdown.

Who operated structure?

Since Dam No. 2 was completed in 2005, LDWF personnel have operated the structure during drawdowns. Drawdowns prior to 2005 were through Dam No. 1 which is the responsibility of LDOTD who operated the structure at the request of LDWF.

Fish kills

No documented fish kills have occurred during drawdowns or at any other time.

Fish kills / disease history, LMBV

A review of the records indicates Nantachie Lake was not sampled for LMBV. No fish kills or disease history have been documented.

Contaminants / Pollution

No documented records of contaminants or pollution have been located in the files. Currently there are no fish consumption advisories for Nantachie Lake. However, annual updates can be found at the LDHH and LDWF links below.

www.ldh.la.gov/EatSafeFish

<https://www.wlf.louisiana.gov/page/fish-consumption-advisories>

Water level

Normal pool elevation for Nantachie Lake is 95.0 M.S.L. Water levels fluctuate significantly due to the large watershed. The lake waters commonly rise one to two feet during periods of high rainfall. Water level in Nantachie Lake also fluctuates due to backwater flow from the Red River. Water level rises from four to six feet may occur on rare occasions, however, a 500-year flood event occurred in 2016 when the lake level rose to 11 feet above pool stage on March 18 – 19. This was caused by back-flooding from the Red River (Figure 1). Lake levels may be monitored online at:

https://waterdata.usgs.gov/la/nwis/uv/?site_no=07353520&PARAMeter_cd=00065,72020,63160,00060

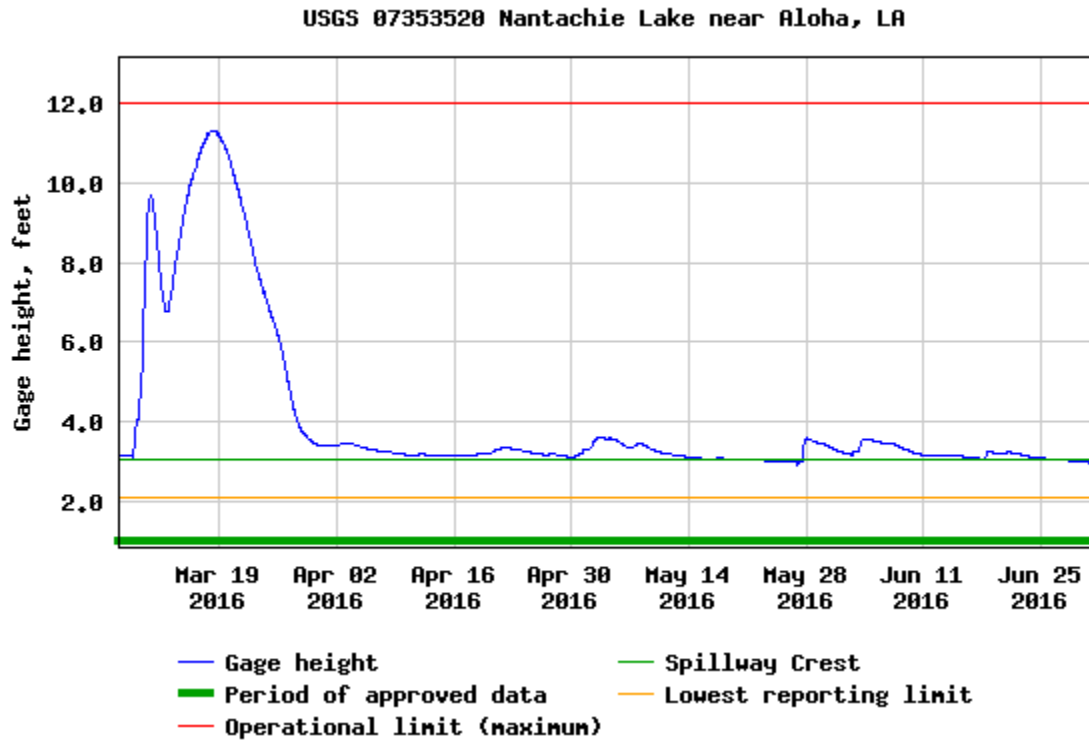


Figure 1. Nantachie Lake gage height from March 1 to June 30, 2016. Graphics from USGS gage station 07353520 near Aloha, LA.

Biological

Fish samples

LDWF has sampled fish populations in Nantachie Lake with various gear types since 1980. A listing of historical and scheduled fish sampling is found in Table 4.

Table 4. Historical and proposed fisheries sampling on Nantachie Lake, Louisiana.

YEAR	SAMPLING GEAR
1980	Rotenone – 6 Stations
1984	Rotenone – 6 Stations
1990	Electrofishing Boom (Fall – 1 Station, Spring – 3 Stations)
1994	Rotenone – 4 Stations
1995	Electrofishing Forage (Fall – 1 Station) Electrofishing Boom (Fall – 1 Station, Spring – 2 Stations) Gill Net (Winter – 2 Stations)
1996	Gill Net (Winter – 2 Stations)
1999	Seine Net (Summer – 3 Stations)
2000	Seine Net (Summer – 3 Stations)
2001	Seine Net (Summer – 3 Stations) Electrofishing (Spring and Fall – 4 Stations)
2002	Gill Net (Winter – 2 Stations)
2003	Electrofishing (Spring and Fall – 4 Stations)
2005	Electrofishing (Spring and Fall – 4 Stations)
2007	Electrofishing (Spring – 4 Stations) Gill Net (Winter – 3 Stations)
2010	Electrofishing (Spring – 4 Stations)
2013	Gill Net (Winter – 3 stations)
2014	Electrofishing (Spring and Fall – 4 Stations) Electrofishing Forage (Fall – 1 Station)
2017	Lead Net (Winter – 3 stations)
2018	Electrofishing (Spring and Fall – 4 Stations) Electrofishing Forage (Fall – 1 Station)
2020	Seine Net (Summer – 3 Stations)
2021	No Samples Scheduled

Lake records

No official records are kept for Nantachie Lake.

Stocking History

Fish stockings have been sporadic in Nantachie Lake. The stockings have generally occurred following drawdowns. The primary species stocked has been Florida Bass (Table 5).

Table 5. Fish stocking records for Nantachie Lake, Louisiana, from 1984 -2019.

Year	Florida bass	Channel Catfish	Triploid Grass Carp
1984	65,300	-	-
1985	-	13,000	-
1986	2,800	13,000	-
2002	25,911	-	-
2003	19,452	-	-
2004	20,843	-	-
2006	15,192	-	-
2008	436,440	-	-
2009	18,480	-	-
2013	10,137	-	2,000
2014	24,250	-	-
2015	20,136	-	-
2017	-	-	3,000
2019	31,590	-	-

Species profile

As per Freshwater Fishes of Louisiana by Dr. Neil H. Douglas, fish species listed below in Table 6 have been collected or are likely to occur in Nantachie Lake, LA.

Table 6. Fish species known to occur in the Nantachie Lake, LA watershed.

Lamprey Family, PETROMYZONTIDAE

Southern Brook Lamprey, *Ichthyomyzon gagei* Hubbs and Trautman

Chestnut Lamprey, *Ichthyomyzon castaneus* Girard

Gar Family, LEPISOSTEIDAE

Spotted Gar, *Lepisosteus oculatus* (Winchell)

Longnose Gar, *Lepisosteus osseus* (Linnaeus)

Shortnose Gar, *Lepisosteus platostomus* Rafinesque

Alligator Gar, *Atractosteus spatula* Lacépède

Bowfin Family, AMIIDAE

Bowfin, *Amia calva* Linnaeus

Freshwater Eel Family, ANGUILLIDAE

American Eel, *Anguilla rostrata* (Lesueur)

Herring Family, CLUPEIDAE

Gizzard Shad, *Dorosoma cepedianum* (Lesueur)

Threadfin Shad, *Dorosoma petenense* (Günther)

Carp Family, XENOCYPRIDIDAE

Triploid Grass Carp, *Ctenopharyngodon idella* Cuvier and Valenciennes

Carp Family, CYPRINIDAE

Common Carp, *Cyprinus carpio* Linnaeus

Holarctic Minnow Family, LEUCISCIDAE

Blacktail Shiner, *Cyprinella venusta* (Girard)

Cypress Minnow, *Hybognathus hayi* Jordan

Striped Shiner, *Luxilus chrysocephalus* Rafinesque

Golden Shiner, *Notemigonus crysoleucas* (Mitchill)

Emerald Shiner, *Notropis atherinoides* Rafinesque

Taillight Shiner, *Notropis maculatus* (Hay)

Weed Shiner, *Notropis texanus* (Girard)

Mimic Shiner, *Notropis volucellus* (Cope)

Bullhead Minnow, *Pimephales vigilax* (Baird and Girard)

Creek Chub, *Semotilus atromaculatus* (Mitchill)

Sucker Family, CATOSTOMIDAE

Lake Chubsucker, *Erimyzon sucetta* (Lacépède)

Smallmouth Buffalo, *Ictiobus bubalus* (Rafinesque)

Bigmouth Buffalo, *Ictiobus cyprinellus* (Valenciennes)

Black Buffalo, *Ictiobus niger* (Rafinesque)

Spotted Sucker, *Minytrema melanops* (Rafinesque)

Freshwater Catfish Family, ICTALURIDAE

Black Bullhead, *Ameiurus melas* (Rafinesque)

Yellow Bullhead, *Ameiurus natalis* (Lesueur)

Tadpole Madtom, *Noturus gyrinus* (Mitchill)

Channel Catfish, *Ictalurus punctatus*

Flathead Catfish, *Pylodictis olivaris* (Rafinesque)

Pike Family, ESOCIDAE

Grass Pickerel, *Esox americanus vermiculatus* (Lesueur)

Chain Pickerel, *Esox niger* (Lesueur)

Pirate Perch Family, APHREDODERIDAE

Pirate Perch, *Aphredoderus sayanus* (Gilliams)

Topminnow Family, FUNDULIDAE

Golden Topminnow, *Fundulus chrysotus* (Günther)

Western Starhead Topminnow, *Fundulus blairae* (Agassiz)
Blackstripe Topminnow, *Fundulus notatus* (Rafinesque)
Blackspotted Topminnow, *Fundulus olivaceus* (Storer)

Livebearer Family, POECILIIDAE

Western Mosquitofish, *Gambusia affinis* (Baird and Girard)

Silverside Family, ATHERINIDAE

Brook Silverside, *Labidesthes sicculus* (Cope)

Temperate Bass Family, MORONIDAE

White Bass, *Morone chrysops* (Rafinesque)

Yellow Bass, *Morone mississippiensis* (Jordan and Eigenmann)

Striped Bass, *Morone saxatilis* (Walbaum)

Sunfish Family, CENTRARCHIDAE

Green Sunfish, *Lepomis cyanellus* (Rafinesque)

Warmouth, *Lepomis gulosus* (Cuvier)

Orangespotted Sunfish, *Lepomis humilis* (Girard)

Bluegill, *Lepomis macrochirus* (Rafinesque)

Dollar Sunfish, *Lepomis marginatus* (Holbrook)

Longear Sunfish, *Lepomis megalotis* (Rafinesque)

Redear Sunfish, *Lepomis microlophus* (Günther)

Spotted Sunfish, *Lepomis punctatus* (Valenciennes)

Bantam Sunfish, *Lepomis symmetricus* (Forbes)

Florida Largemouth Bass, *Micropterus salmoides floridanus* (Kassler et al)

Northern Largemouth Bass, *Micropterus salmoides salmoides* (Lacépède)

White Crappie, *Pomoxis annularis* (Rafinesque)

Black Crappie, *Pomoxis nigromaculatus* (Lesueur)

Perch Family, PERCIDAE

Swamp Darter, *Etheostoma fusiforme* (Girard)

Slough Darter, *Etheostoma gracile* (Girard)

Drum Family, SCIAENIDAE

Freshwater Drum, *Aplodinotus grunniens* (Rafinesque)

Pygmy Sunfish Family, ELASSOMATIDAE

Banded Pygmy Sunfish, *Elassoma zonatum* (Jordan)

Genetics

Electrophoretic analysis of largemouth bass was conducted in 1990, 2001, 2010 and 2014 in Nantachie Lake. The complete record of genetic testing is found in Table 7.

Table 7. Genetics of largemouth bass in Nantachie Lake, Louisiana from 1990 - 2014.

Year	% Northern	% Florida	% Hybrid	% Florida Influence
1990 (n=28)	82 (n=23)	0	18 (n=5)	18 (n=5)
2001 (n=96)	75 (n=72)	3 (n=3)	22 (n=21)	25 (n=24)
2010 (n=74)	85 (n=63)	1 (n=1)	14 (n=10)	15 (n=11)
2014 (n=80)	66.25 (n=53)	1.25 (n=1)	32.5 (n=26)	33.75 (n=27)

Threatened/endangered/exotic species

Exotic species of fish include Common and Grass Carp.

Creel Survey

No creel survey has been conducted on Nantachie Lake.

Hydrological Changes

Hydrological changes have been significant since the lake was created in 1964. The lock and dam system placed on the Red River in 1993 removed the ability to draw the water level down in the lake. This problem was mitigated by the USACE when they built an additional water control structure in 2005. Details of this issue are located above. Development around the shoreline has been significant with the building of homes and camps.

Water Use

Hunting

The lake is utilized primarily for duck hunting. Several hundred acres on the north end of the lake are privately owned and utilized for duck hunting. However, this area remains accessible to fishermen due to the flood easement purchased by the state prior to lake construction. Statewide hunting regulations apply. To review regulations go to www.wlf.la.gov.

Recreational watersports

Recreational watersports are minimal on Nantachie Lake due to the extensive coverage of dead timber and underwater obstructions.

Fishing

Nantachie Lake is popular for recreational fishing -- primarily for Largemouth Bass and crappie. The lake also supports a healthy population of Channel, Blue and Flathead Catfish.

Scuba Diving

Minimal scuba diving occurs in Nantachie Lake due to limited water clarity.

Swimming

Swimming occurs in the lake. There are no beaches or designated swimming areas. The majority of swimming occurs from private piers and boat docks.

Irrigation

Nantachie Lake water is not used for irrigation at this time. See the Events/ Problems section of this document for irrigation considerations.

Appendix I. Location of water control structures
([return to date](#))



Note:

Nantachie Dam No. 1 was completed in 1964. It provides an overflow spillway and maintains lake water levels at 95.0 M.S.L. It does not provide drawdown capabilities.

Nantachie Dam No. 2 was completed in 2005. It provides drawdown capabilities to the 7-foot depth contour.

Appendix II. Cooperative Agreement between the Red River Waterway Commission and the Grant Parish Police Jury

COOPERATIVE AGREEMENT

BETWEEN

THE RED RIVER WATERWAY COMMISSION

AND

THE GRANT PARISH POLICE JURY

THIS AGREEMENT (the "Agreement") is entered into as of February 28, 2003 between the RED RIVER WATERWAY DISTRICT, through its statutorily empowered governing body, the RED RIVER WATERWAY COMMISSION (the "Waterway Commission") represented by Kenneth P. Guidry, duly authorized by vote of the Waterway Commission taken on the 19th day of February, 2003; and the Grant Parish Police Jury ("Police Jury"), represented by Tom Hamilton, duly authorized by vote of the Police Jury taken on the 13th day of March, 2003.

WITNESSETH THAT:

WHEREAS, the Waterway Commission and the Police Jury agree that the drawdown capability of Nantachie Lake, located in Grant Parish, Louisiana, must be improved in order to facilitate lake management, including aquatic weed control and fishery management;

WHEREAS, Waterway Commission and the Police Jury agree that the most cost efficient and effective manner to improve the drawdown capability of Nantachie Lake is generally to (i) construct a gated drainage structure through the existing Shell Point Levee ("Levee") and repair a slide on the Levee ("New Structure") and (iii) improve existing crossings at seven sites down stream of the New Structure on Bayou Grappe and Sugarhouse Bayou ("Improved Crossings"). Hereinafter the construction of the New Structure and the Improved Crossings are collectively referred to as the "Nantachie Drawdown Project";

WHEREAS, the New Structure shall consist of a single seventy-two inch diameter concrete pressure pipe with an inlet control structure and an outlet channel protection;

WHEREAS, the Improved Crossings will be constructed at the location of six currently existing agricultural field road crossings and one currently existing parish road crossing;

WHEREAS, the six agricultural field road crossings will be improved by replacing the existing crossing with two to five (as determined by the Army Corps of Engineers) seventy two inch corrugated metal pipe culverts with associated riprap, erosion protection, and granular surfacing;

WHEREAS, the one parish road crossing will be improved by replacing the existing crossing with two to five (as determined by the Army Corps of Engineers) seventy two inch corrugated metal pipe culverts with associated riprap, erosion protection, and paved surfacing ("Parish Crossing Improvements");

WHEREAS the Army Corps of Engineers. ("Corps") has agreed to design and construct the Nantachie Drawdown Project if the Waterway Commission enters into Supplemental Assurances Between the Department of the Army and the Red River Waterway Commission ("Supplemental Assurances") which requires the Waterway Commission to (i) provide without cost to the United States all lands, easements and rights-of-way required for the construction and maintenance of the Nantachie Drawdown Project; and (ii) provide for the operation and maintenance of the Nantachie Drawdown Project according to the water control plan and maintenance manual provided for the New Structure.

WHEREAS, the Waterway Commission is agreeable to entering into the Supplemental Assurances with the Corps;

WHEREAS, the Waterway Commission and the Police Jury understand that the Waterway Commission cannot fulfill all obligations required by the Supplemental Assurances without assistance from the Police Jury; and

WHEREAS, in order to insure the fulfillment of all obligations set forth in the Supplemental Assurances, the Police Jury agrees to fulfill the certain obligations and commitments required by the Supplemental Assurances, as set forth herein.

NOW THEREFORE, Waterway Commission and the Police Jury agree as follows:

I.
Cooperative Development

In consideration of the Waterway District entering into the Supplemental Assurances and the Corps constructing the Nantachie Drawdown Project, the Police Jury agrees that upon substantial completion of construction of the Parish Crossing Improvements, the Police Jury shall (i) accept ownership of the Parish Crossing Improvements and (ii) provide the perpetual operation, maintenance, repair and replacement of the Parish Crossing Improvements. The Parish Crossing Improvements shall be operated and maintained according to the water control plan and maintenance manual provided by the Corps. Operation of the Parish Crossing Improvements shall include, but not be limited to, keeping the corrugated metal pipe culverts free of debris during Nantachie Lake drawdown periods.

The Police Jury further agrees to keep all corrugated metal pipe culverts at the Improved Crossings free of debris during Nantachie Lake drawdown periods so as to ensure unencumbered water flowage through the culverts.

The Police Jury also agrees to provide the Corps and/or the Waterway District with all necessary easements, rights-of-way, permits, and authority necessary to construct the Nantachie Drawdown Project, including the New Structure and/or any Improved Crossings.

Assignability

This Agreement may not be assigned nor transferred.

3.

Indemnification

The Police Jury will indemnify, defend and save harmless Waterway Commission (or its commissioners, agents, servants or employees) from and against all claims, demands, suits, judgments or awards of any money accruing in favor of any party against the Waterway Commission for loss of life or injury or damage to persons or property growing out of or resulting from, or by reason of Police Jury operating, maintaining, repairing or replacing the Parish Crossing Improvements.

4.

Severability

If any provision or item of this Agreement or the application thereof is held invalid, such invalidity shall not affect other provisions, items or applications of this Agreement which can be given effect without the invalid provisions, items or applications and to this end the provisions of this Agreement are hereby declared severable.

WITNESSES:

RED RIVER WATERWAY DISTRICT, through its
statutorily empowered governing body, the RED
RIVER WATERWAY COMMISSION

[Signature]
Paul Brocas

By: Kenneth P. Guidry
Kenneth P. Guidry, Executive Director

[Signature]

WITNESSES:

GRANT PARISH POLICE JURY

Delia Ducha
Clara J. Neulle

By: Tom Hornator
President

[Signature]
NOTARY PUBLIC

Appendix III. Cooperative Agreement between the Red River Waterway Commission and the Louisiana Department of Wildlife and Fisheries
[\(return to who controls\)](#)

COOPERATIVE AGREEMENT

BETWEEN

THE RED RIVER WATERWAY COMMISSION

AND

THE LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES

THIS AGREEMENT (the "Agreement") is entered into as of MARCH 31, 2003 between the RED RIVER WATERWAY DISTRICT, through its statutorily empowered governing body, the RED RIVER WATERWAY COMMISSION (the "Waterway Commission") represented by Kenneth P. Guidry, duly authorized by vote of the Waterway Commission taken on the 19th day of FEBRUARY, 2003; and the LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES ("Department"), represented by James H. Jenkins, Secretary.

WITNESSETH THAT:

WHEREAS, the Waterway Commission and the Department agree that the drawdown capability of Nantachie Lake, located in Grant Parish, Louisiana, must be improved in order to facilitate lake management, including aquatic weed control and fishery management;

WHEREAS, Waterway Commission and the Department agree that the most cost efficient and effective manner to improve the drawdown capability of Nantachie Lake is generally to (i) construct a gated drainage structure through the existing Shell Point Levee ("Levee") and repair a slide on the Levee ("New Structure") and (ii) improve existing crossings at seven sites down stream of the New Structure on Bayou Grappe and Sugarhouse Bayou ("Improved Crossings"). Hereinafter the construction of the New Structure and the Improved Crossings are collectively referred to as the "Nantachie Drawdown Project"; and more specifically include the following:

- (1) the New Structure shall consist of a single seventy-two inch diameter concrete pressure pipe with an inlet control structure and an outlet channel protection;
- (2) the Improved Crossings will be constructed at the location of six currently existing agricultural field road crossings and one currently existing parish road crossing;
- (3) the six agricultural field road crossings will be improved by replacing the existing crossing with two to five (as determined by the Army Corps of Engineers) seventy two inch corrugated metal pipe culverts with associated riprap, erosion protection, and granular surfacing;
- (4) the one parish road crossing will be improved by replacing the existing crossing with two to five (as determined by the Army Corps of Engineers) seventy two inch corrugated metal pipe culverts with associated riprap, erosion protection, and paved surfacing;

WHEREAS the Army Corps of Engineers, ("Corps") has agreed to design and construct the Nantachie Drawdown Project if the Waterway Commission enters into Supplemental Assurances Between the Corps and the Waterway Commission ("Supplemental Assurances") which requires the Waterway Commission to (i) provide without cost to the United States all lands, easements and rights-of-way required for the construction and maintenance of the Nantachie Drawdown Project; and (ii) provide for the operation and maintenance of the Nantachie Drawdown Project according to the water control plan and maintenance manual provided for the New Structure;

WHEREAS, the Waterway Commission is agreeable to entering into the Supplemental Assurances with the Corps;

WHEREAS, the Waterway Commission and the Department understand that the Waterway Commission cannot fulfill all obligations required by the Supplemental Assurances without assistance from the Department; and

WHEREAS, in order to insure the fulfillment of all obligations set forth in the Supplemental Assurances, the Department agrees to fulfill the certain obligations and commitments required by the Supplemental Assurances, as set forth herein.

NOW THEREFORE, Waterway Commission and the Department agree as follows:

1.

Cooperative Development

In consideration of the Waterway District entering into the Supplemental Assurances and the Corps constructing the Nantachie Drawdown Project, the Department agrees that upon substantial completion of construction of the New Structure, the Department shall (i) accept ownership of the New Structure and (ii) provide, to the extent allowed by law, for the perpetual operation, maintenance, repair and replacement of the New Structure. The New Structure shall be operated and maintained according to the water control plan and maintenance manual provided by the Corps. The New Structure shall be utilized by the Department solely for lake management, including without limitation aquatic weed control and fishery management. The parties acknowledge and agree that the New Structure was not designed for flood control, and therefore the Department agrees not to operate the New Structure for flood control. Operation of the New Structure shall include, but not be limited to, determining when the New Structure shall be utilized to draw down the water level of Nantachie Lake and determining the extent and rate of the drawdown.

The Department also agrees to assist in obtaining appropriate permits and cooperation from the Nineteenth Louisiana Levee District ("Levee District") by making a request to the Levee District for (i) permits necessary for the Corps to Construct the Nantachie Drawdown Project; and (ii) permits necessary for the Department to perpetually operate, maintain, repair and replace the New Structure.

Assignability

This Agreement may not be assigned nor transferred.

3.

Indemnification

The Department will indemnify, defend and save harmless Waterway Commission (or its commissioners, agents, servants or employees) from and against all claims, demands, suits, judgments or awards of any money accruing in favor of any party against the Waterway Commission for loss of life or injury or damage to persons or property growing out of or resulting from, or by reason of Department operating, maintaining, repairing or replacing the New Structure.

4.

Severability

If any provision or item of this Agreement or the application thereof is held invalid, such invalidity shall not affect other provisions, items or applications of this Agreement which can be given effect without the invalid provisions, items or applications and to this end the provisions of this Agreement are hereby declared severable.

WITNESSES:

Billie Delphin
Clare D Weaver

RED RIVER WATERWAY DISTRICT, through its
statutorily empowered governing body, the RED
RIVER WATERWAY COMMISSION

By: Kenneth P. Guidry
Kenneth P. Guidry, Executive Director

Cathy D. [Signature]
NOTARY PUBLIC

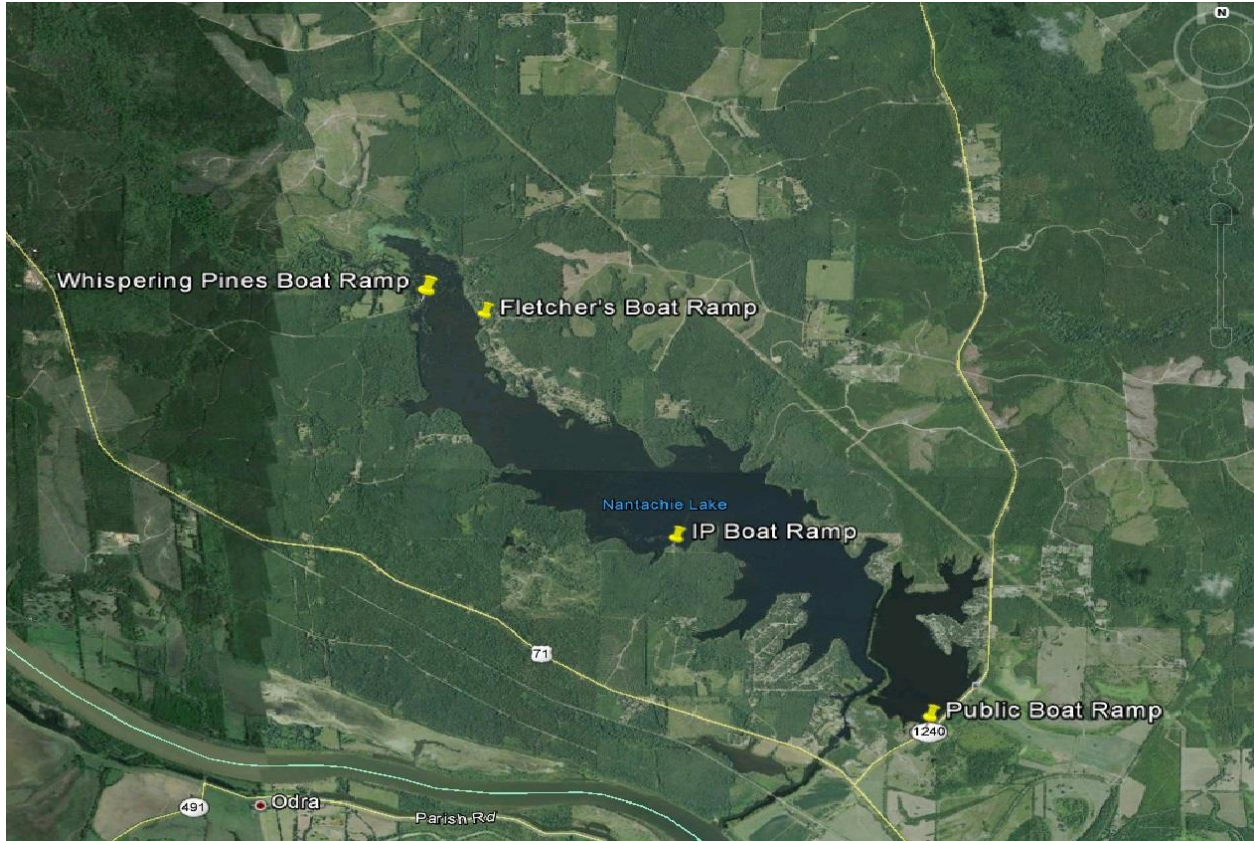
Kerna A. Guidry
Susan C. Hawkins

FISHERIES

By: [Signature]
James H. Jenkins, Secretary

[Signature]
NOTARY PUBLIC

Appendix IV. PUBLIC BOAT LAUNCHES ON NANTACHIE LAKE, LA.
([return to access](#))



Appendix V. JOINT AGREEMENT TO OPEN THE NANTACHIE LAKE LOCKS

[\(return to events\)](#)

JOINT AGREEMENT TO OPEN THE NANTACHIE LAKE LOCKS

This agreement to open the Nantachie Lock and Dam Structures is made and entered into by and between:

GRANT PARISH POLICE JURY, 200 Main Street, Grant Parish Courthouse Building, Colfax, Louisiana 71417, represented herein through its authorized President, Arnold Murrell; and

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES, 2000 Quail Drive, Baton Rouge, Louisiana 70808, represented herein through its authorized Secretary, Mr. Robert Barham.

RECITALS

WHEREAS, crops and cattle are dying as a result of the drought.

WHEREAS, there is a dire emergency need for the infusion of water from the Red River into Nantachie Lake to help provide water for immediate emergency relief from the drought.

WHEREAS, The Louisiana Department of Wildlife and Fisheries has hereby agreed to allow the locks at Nantachie Lake to be opened at both the concrete dam structure and earthen dam structure to allow the inflow of the necessary water from the Red River into Nantachie Lake.


NOW, THEREFORE, in accordance with Resolution 77-00-11 of the Grant Parish Police Jury which was passed, approved, and adopted on November 1, 2011 the Grant Parish Police Jury through its President Arnold Murrell has hereby agreed to hold harmless and indemnify the Louisiana Department of Wildlife and Fisheries and other agencies of the State of Louisiana from any and all liability for damage that may occur as a result of the opening and closing of said structures.

IN WITNESS WHEREOF, the parties hereto have executed and entered this
"Joint Agreement to Open the Natchie Lake Locks" on this 7th day of November
2011.

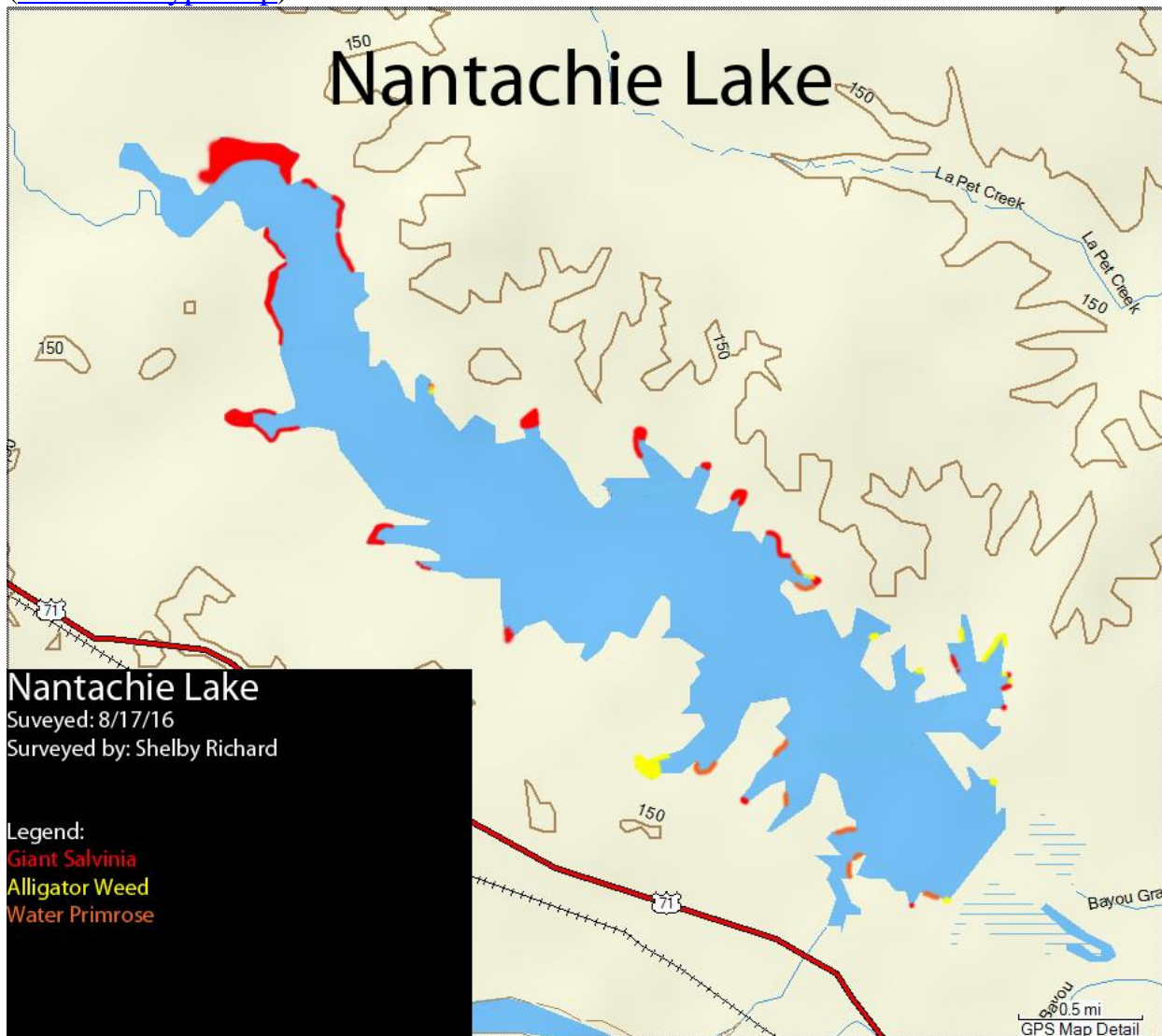
GRANT PARISH POLICE JURY

By: 
ARNOLD MURRELL
PRESIDENT
GRANT PARISH POLICE JURY

LOUISIANA DEPARTMENT OF
WILDLIFE AND FISHERIES

By: 
ROBERT BARHAM
SECRETARY
STATE OF LOUISIANA
DEPARTMENT OF WILDLIFE
AND FISHERIES

Appendix VI. Type Map
([return to Typemap](#))



August 2016 aquatic vegetation survey found coontail germinating in 6' or less contours but it's establishment was minimal. Hydrilla was surveyed as a fringe along the Nantachie dam levee. Giant salvinia was found in some coves mostly on the north end of the lake. Alligator weed and water primrose were found on shallow flats and along some bank lines.