

# **LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES**



**OFFICE OF FISHERIES  
INLAND FISHERIES SECTION**

**PART VI -A**

**WATERBODY MANAGEMENT PLAN SERIES**

**COCODRIE LAKE**

**LAKE HISTORY & MANAGEMENT ISSUES**

## **CHRONOLOGY**

DOCUMENT SCHEDULED TO BE UPDATED EVERY THREE YEARS

November 2011 - Prepared By Jody David, Biologist Manager, District 6

January 2013 – Updated By Jody David, Biologist Manager, District 6

June 2016 – Updated By Jody David, Biologist Manager, District 6

# TABLE OF CONTENTS

GENERAL INFORMATION .....	5
<i>Date reservoir formed</i> .....	5
<i>Impoundment</i> .....	5
<i>Size</i> .....	5
<i>Water-shed</i> .....	5
<i>Pool stage</i> .....	5
<i>Border waters</i> .....	6
<i>Drawdown structure description</i> .....	6
<i>Who controls</i> .....	6
LAKE AUTHORITY .....	7
<i>Cocodrie Lake Commission</i> .....	7
<i>Authorization</i> .....	7
ACCESS .....	7
<i>Boat docks</i> .....	7
<i>Piers</i> .....	7
<i>State/Federal facilities</i> .....	7
<i>Reefs</i> .....	7
SHORELINE DEVELOPMENT .....	8
<i>State/National Parks</i> .....	8
<i>Shoreline development by landowners</i> .....	8
PHYSICAL DESCRIPTION OF LAKE.....	8
<i>Shoreline length</i> .....	8
<i>Timber type</i> .....	8
<i>Average depth</i> .....	8
<i>Maximum depth</i> .....	8
<i>Natural seasonal water fluctuation</i> .....	8
EVENTS / PROBLEMS .....	9
<b>MANAGEMENT ISSUES .....</b>	<b>10</b>
AQUATIC VEGETATION .....	10
<i>Type map</i> .....	10
<i>Biomass</i> .....	10
<i>Treatment history by year available</i> .....	10
HISTORY OF REGULATIONS .....	11
<i>Recreational</i> .....	11
<i>Commercial</i> .....	11
DRAWDOWN HISTORY .....	11
<i>Drawdown dates</i> .....	11
<i>Fish kills/Disease History</i> .....	13
CONTAMINANTS / POLLUTION .....	13
<i>Water quality</i> .....	13
BIOLOGICAL.....	13
<i>Fish sampling history</i> .....	13
<i>Gear</i> .....	14
<i>Lake records</i> .....	14
<i>Stocking History</i> .....	14
<i>Species profile</i> .....	15
<i>Genetics</i> .....	18
<i>Threatened/endangered/exotic species</i> .....	18
CREEL .....	18
HYDROLOGICAL CHANGES .....	19
WATER USE.....	19
<i>Hunting</i> .....	19
<i>Skiing</i> .....	19
<i>Scuba Diving</i> .....	19

<i>Swimming</i> .....	19
<i>Irrigation</i> .....	19
<b>APPENDIX I</b> .....	<b>20</b>
<b>APPENDIX II</b> .....	<b>20</b>
<b>APPENDIX III</b> .....	<b>22</b>
<b>APPENDIX IV</b> .....	<b>23</b>
<b>APPENDIX V</b> .....	<b>26</b>
<b>APPENDIX VI</b> .....	<b>27</b>
<b>APPENDIX VII</b> .....	<b>28</b>
<b>APPENDIX VIII</b> .....	<b>30</b>

# LAKE HISTORY

## GENERAL INFORMATION

### Date reservoir formed

Act 38 of the 1957 Louisiana Legislature created the Cocodrie Lake Game and Fish Preserve and Commission within the Parishes of Evangeline and Rapides. Bayou Cocodrie Dam was designed by the Louisiana Office of Public Works, constructed by T.P. Groom, Inc. and completed in 1959. Section 3 of the Act specifically protected riparian rights downstream of the project and Bayou Cocodrie flows are not to fall below the established minimum low flows as determined by the United States Geological Survey gauging station at Clearwater, LA ([APPENDIX I](#)). When the Cocodrie Commission was abolished with Act 858 in January 1982, the original riparian rights downstream, as authorized by Act 38 were retained in full force.

### Impoundment

Cocodrie Lake was formed with the impoundment of Cocodrie Bayou and its tributaries. The dam consists of an earthen embankment, approximately 1,400 feet long with a 12 foot crown at elevation 65 feet mean sea level (MSL). There is one primary spillway consisting of an un-gated reinforcement concrete weir (spillway), approximately 100 feet long with a crest elevation of 51 feet MSL. Present tailwater elevation is 46 feet MSL. Maximum embankment height is 28 feet and constructed of a homogenous earth fill with stone rip-rap shore protection. Lakeside embankment slope is 1:3 with a 14 foot wide crown.

Ownership –Crowell Land & Mineral Co., Texaco Co., Meridian Land & Mineral Corp., Oscar Sylvester, Leslie Ardoin, Jimmie Poe, L.H. Mizell Heirs, J.D. Raborn, Sean Richard Scott, Edwin L. Barton, A.B. Wettermark, T.O. Wells, John Ludeau, and the State of Louisiana. (see [APPENDIX II](#))

Purposes for creation – Primarily for irrigation and power generation, and secondarily for recreational activities (fishing, hunting and boating).

### Size

6,100 surface acres; 9,000 acre-feet normal pool; maximum storage 100,000 acre-feet.

### Water-shed

Watershed is approximately 100,000 acres (240 square miles). Water shed ratio is 16:1; Land cover in the watershed is composed of rolling upland forested hills (mainly pines); there is very little agricultural land use.

### Pool stage

51.0' above mean sea level (MSL)

### Parish/s located

Bayou Cocodrie Dam is located in Sections 4 and 5 of Township 1 South, Range 1 East, in Rapides and Evangeline Parishes, about 9 miles north of Turkey Creek, Louisiana, and is on USGS Quad Map 110-C. The principal spillway crosses the embankment at

Latitude 31° 00' 05" N and Longitude -92° 22' 57" W. From Interstate Highway 49, Exit 61, proceed 1 mile southerly on US Highway 167 and turn right onto the south dam access road; and then proceed about ¼ mile to the spillway (see [APPENDIX III](#)).

Border waters

Cocodrie Bayou below spillway near Clearwater, Louisiana.

Drawdown structure description

There is one drawdown structure consisting of a reinforced concrete drop inlet structure with one sluice gate, 111 linear feet of 48-inch diameter corrugated metal pipe running under the embankment and a reinforced concrete outlet structure. The lake drops approximately ½ inch/day with the gate completely opened.

Spillway – 100 feet wide

Gate size – four (4) foot gate

Number of gates – one (1)

Condition – Good

Flow rate – N/A

Sluiceway

Sluiceway location – N/A

Sluiceway opening – N/A

Condition – N/A

Flow rate –N/A

Who controls

Louisiana Department of Transportation and Development (DOTD) are responsible for the maintenance and operation of 19 reservoir embankments as per Act 270 of the 1984 Louisiana Legislative Session, which includes Cocodrie Reservoir. The State of Louisiana is the owner of the Bayou Cocodrie Dam. Operation and maintenance procedures are the responsibility of the owner, the State of Louisiana, Department of Transportation and Development. DOTD District 08 maintains the northern part of the dam that is in Rapides Parish and DOTD District 03 maintains the southern part of the dam that is in Evangeline Parish.

The LA Dept. of Wildlife & Fisheries and the Cocodrie Lake Game and Fish Commission are responsible for the lake management. LDWF – Opelousas, La. (337) 948-0255

Who operates the structure

Louisiana Department of Transportation & Development

## LAKE AUTHORITY

Act 858 of the 1981 Legislature abolished approximately 19 special game and fish commissions including the Cocodrie Lake Game and Fish Commission which governed Cocodrie Lake. Authorities for lakes & structures were transferred to LDWF. However, parish government under state law can select/appoint a panel of interested/concerned citizens to serve on committees in an advisory capacity to the jury. The Cocodrie Lake Commission fills that role with respect to fish and wildlife issues on Cocodrie Lake.

### Cocodrie Lake Commission

Cocodrie Lake commission consists of five members – 2 from Evangeline parish, 2 from Rapides parish and one representative from the CLECO electric plant.

Chairman – Charles Bo Johnson	Evangeline parish
Johnny Barton	Rapides parish
Henry Corley	Rapides parish
Sam Johnson	Evangeline parish
Joe Sepulvado	CLECO representative

### Authorization

By virtue of the authority conferred by Louisiana Revised Statutes LA R.S. 56:721-722 et seq. and other constitutional and statutory supplemental thereto, there is hereby established a Rapides-Evangeline Parish Cocodrie Lake Fish and Game Preserve.

[APPENDIX IV.](#)

## ACCESS

Map with locations of boat ramps is located in [APPENDIX V.](#)

Map with depth profiles is located in [APPENDIX VI.](#)

### Boat docks

There are seven (7) boat ramps that surround the lake; one (1) public ramp and six (6) pay fee ramps.

### Piers

None

### State/Federal facilities

None

### Reefs

None

Shoreline Development

All land along the shoreline is privately owned except near the control structure on the Northeast end of the lake.

State/National Parks

None

Shoreline development by landowners

Landowner's development consists of homes, camps and timber production.

PHYSICAL DESCRIPTION OF LAKE

Cocodrie Lake is approximately 6,000 surface acres. Water enters the lake year round through a number of tributaries such as Spring, Hurricane, and Cocodrie creeks (spring-fed) on the north/west side of the lake. The lake is densely covered with standing timber which includes Tupelo and Cypress trees. Cocodrie bayou is the main channel that runs through the center of the lake and averages 10 feet in depth. Numerous coves and small finger-like projections of the lake diverge from the channel, and average 3-5 feet at pool stage. Many fallen trees, stumps and aquatic vegetation make up the majority of the available fish habitat.

Shoreline length

225 miles

Timber type

Cypress/Tupelo

Average depth

5-6 feet

Maximum depth

12 feet

Natural seasonal water fluctuation

Water level fluctuation is typically 3-5 feet, annually.

## EVENTS / PROBLEMS

CLECO electric plant in St. Landry, Louisiana depends on water from Cocodrie Lake for power generation purposes. Therefore, it is necessary for water to flow over the spillway or through the control gate. During the drought of 1999 and 2000, the control gate had to be opened to supply enough water for the plant to continue to operate and supply electricity for their customers.

Beginning in the mid 1960's and extending to 2012, aquatic vegetation has been problematic for fishing and hunters throughout the lake. Dense stands of submerged and floating vegetation have covered the lake. Drawdowns and herbicides have been used to combat the problem.

Herbicide applications on floating plants are difficult due to the density of standing timber in the lake. Areas with plants that cannot be reached using herbicide applications continue to thrive and produce an abundance of aquatic growth each year.

A meeting was held on January 11, 2008 with the Cocodrie Lake commission concerning drawing the lake down to control the spread of common salvinia and submerged vegetation. The lake commission voted to open the one 4-foot gate as early as March 17, 2008 and remain open for 3 years unless the Cocodrie Lake board decides to close it. Periodic meetings with the board will be held to discuss progress of the drawdown. As the lake recedes, spray crews with LDWF will periodically make applications to the salvinia as it moves out from the wooded areas that limit access to LDWF spray boats. The rate of drawdown will be slow, since there is only one 4-foot gate to operate.

On May 2<sup>nd</sup> 2011, the control gate was closed with common salvinia amounts reduced drastically. Due to drought conditions of the past 2-3 years, Cocodrie Bayou levels remained extremely low. Therefore CLECO plant requested to open the control gate to a minimum of 50% to prevent the shutdown of the plant. The Cocodrie Lake commission and LDWF agreed to open the gate 50% and in June of 2011 it was opened. Water levels increased due to rain events in the late summer of 2011 and the gate was closed on September 10<sup>th</sup> 2011.

In 2012, drought conditions kept water levels in Cocodrie Bayou very low. Therefore CLECO electric plant in St. Landry, Louisiana requested to open the control gate in Cocodrie Lake to a minimum of 75% to prevent the shutdown of the plant. The Cocodrie Lake commission and LDWF agreed to the request and DOTD open the gate on June 26<sup>th</sup>, 2012. Water levels increased due to rain events and the gate was closed in mid-September of 2012.

In 2013 and 2015, drought once again kept water levels in Cocodrie Bayou very low. The CLECO electric plant in St. Landry, Louisiana requested an opening of the control gate on Cocodrie Lake to a minimum of 75% to prevent the shutdown of the plant. The Cocodrie Lake Commission and LDWF agreed to the request and DOTD opened the gate in June 2013, and again in July 2015. Water levels increased due to rain events and the gate was closed in September of 2013 and 2015.

## MANAGEMENT ISSUES

### AQUATIC VEGETATION

Since impoundment, Cocodrie Lake has had an over-abundance of aquatic vegetation. Most predominant species include coontail (*Ceratophyllum demersum*), fanwort (*Cabomba caroliniana*), American lotus (*Nelumbo lutea*), and invasive plant species including water hyacinth (*Eichhornia crassipes*), hydrilla (*Hydrilla verticillata*) and common salvinia (*Salvinia minima*). Control efforts for water hyacinth include applications of the herbicide 2,4-Dichlorophenoxyacetic acid (2,4-D) and for common salvinia include applications of the herbicide Reward<sup>®</sup> (Diquat dibromide). Sonar<sup>®</sup> (fluridone) is used for hydrilla control. Drawdowns are also used to control aquatic vegetative growth along the shorelines.

#### Type map

Aquatic vegetative type mapping have been conducted since 1995. Years in which sampling occurred include: 1994, 1995, 1998, 1999, 2003, 2005, 2006, 2007, 2009, 2011, 2012 and 2014. ([APPENDIX VII](#)).

#### Biomass

No biomass sampling conducted.

#### Treatment history by year available

##### Biological

Salvinia weevils were stocked in Cocodrie Lake on 10/18/2007. Common Salvinia plants were collected with the weevils and transported to Cocodrie Lake. From there these plants were distributed throughout the lake by boat. This was an attempt to control the spread of common salvinia. Results from this stocking are uncertain.

##### Chemical

Herbicide applications are used annually to control emergent and floating vegetation including water hyacinth, duckweed, common salvinia and American lotus as shown in Table 1. In 2008, hydrilla was treated by LDWF with Sonar. In 2015, giant salvinia (*Salvinia molesta*) was discovered throughout the lake. This invasive species currently occupies approximately 10% of the lake. Spray crews have applied herbicide to control the spread of this invasive plant and will continue as needed.

Table 1. Herbicide application employed on Cocodrie Lake, Louisiana from 2005 – 2015.

<b>Cocodrie Lake Herbicide Applications</b>				
<b>Year</b>	<b>Gallons</b>	<b>Pounds</b>	<b>Acres</b>	<b>Vegetation</b>
2005	87		135	hyacinth/duckweed/common salvinia
2006	314		416	common salvinia
2007	126		158	common salvinia/duckweed
2008	137	720	322	hyacinth/duckweed/common salvinia hydrilla (Sonar treatment in Bennett's Bay)
2009	253		407	hyacinth/duckweed/common salvinia
2010	95		149	common salvinia/duckweed/water hyacinth
2011	273		377	common salvinia/duckweed/water hyacinth
2012	303		526	Common salvinia/duckweed/water hyacinth
2013	135		187	Common salvinia/water hyacinth/alligator weed
2014	43		57	Common salvinia/water hyacinth
2015	22.5		30	Common & giant salvinia

## HISTORY OF REGULATIONS

### Recreational

Statewide regulations have been in effect for all fish species since impoundment.

<http://www.wlf.louisiana.gov/fishing/regulations>

### Commercial

Statewide commercial fishing regulations apply.

<http://www.wlf.louisiana.gov/fishing/regulations>

### Drawdown history

Cocodrie Lake became infested with noxious aquatic plants relatively soon after impoundment. The first drawdown was conducted in 1965 in an effort to combat the submerged aquatic plant problem. Since that time, Cocodrie Lake has been lowered regularly for control of aquatic vegetation. But success is limited due to having only one, four-foot control gate to allow water from the lake. The lake drops approximately ½ - 1 inch per day when the gate is completely opened, and if a significant amount of rainfall occurs, the water rises rapidly and negates drawdown efforts.

### Drawdown dates

There have been 14 drawdowns (Table 2) for control of submerged aquatic vegetation on Cocodrie Lake. The majority of the drawdowns were conducted from September – December (Fall/Winter). Other drawdowns were conducted in the summer months or year round to combat noxious aquatic plants such as common salvinia and hydrilla.

During the drought years of 1999 and 2000, water levels remained low and this reduced aquatic vegetation as well as improved spawning habitat for nesting fishes, which had previously been hindered by the accumulation of organic material, primarily leaf litter.

From 2008 – 2010, the gate remained open year round to control the spread of common salvinia. Spray crews continued to apply herbicide, with some success, as the plants receded from the wooded areas of the reservoir. During the hard freeze of December 2009, and the continued cold weather of January 2010, the percent coverage of common salvinia was reduced substantially.

In 2011, 2012, 2013 and 2015, the gate was opened in the summer months due to drought conditions with a request from CLECO electric plant in St. Landry, Louisiana to enable the plant to continue normal operating conditions. The LDOTD operated the gate to accomplish this flow release.

Table 2. Drawdowns conducted in Cocodrie Lake, Louisiana by year from 1965 – 2015.

YEAR	PURPOSE	FISHING CLOSURE	DEPTH (ft)	% EXPOSED	FISH KILL
1965	Control of native submerged vegetation	No	3-4	30	No
1967	Control of native submerged vegetation	No	3-4	30	No
1970	Control of native submerged vegetation	No	3-4	30	No
1972	Control of native submerged vegetation	No	3-4	30	No
1976	Control of native submerged vegetation	No	3-4	30	No
1983	Control of native submerged vegetation	No	3-4	30	No
1995	Control of native submerged vegetation	No	3	30	No
1996	Control of native submerged vegetation	No	4-5	35	No
1997	Control of native submerged vegetation	No	3-4	30	No
1999	Control of native submerged vegetation	No	3	30	yes
*2000	Control of native submerged vegetation	No	5	45	yes
**2008	Control C. Salvinia and Hydrilla	No	4-5	45	No
**2009	Control C. Salvinia	No	4-5	45	No
**2010	Control C. Salvinia	No	4-5	45	No
***2011	CLECO requested	No	3	30	No
***2012	CLECO requested	No	3	30	No
***2013	CLECO requested	No	3-4	35	No
***2015	CLECO requested	No	2-3	25	No

\*During the drought of 2000, water levels receded three feet below pool stage, therefore a natural drawdown occurred. Some fish perished due to low dissolved oxygen levels caused by the excessive high temperatures.

\*\*Between the years of 2008-2010, the control gate remained opened, thus lowering the lake 4-5 feet

periodically, which assisted in the control and spread of common salvinia.

\*\*\*CLECO requested to open the gate in the summers of 2011 and 2012 due to drought conditions.

During this time spray crews were able to apply herbicide reducing common salvinia amounts. This also occurred in 2013 and 2015.

### Fish kills/Disease History

Fish kills occurred during the drought of 1999 and 2000 due to high water temperatures causing dissolved oxygen levels to plummet. Numerous game fish perished including largemouth bass, crappie and bream. Other species such as carp, catfish, shad and buffalo also died in large numbers.

After Hurricane Rita and Gustav, fish kills occurred, but were minimal. Species included in the die-offs were largemouth bass, crappie, bream and gizzard shad.

LMBV (Largemouth bass virus) – There has been no testing for the largemouth bass virus in this reservoir.

## CONTAMINANTS / POLLUTION

The Louisiana Department of Environmental Quality (DEQ) collects fish species in waterbodies throughout the state to determine mercury concentrations in fish (<http://www.deq.louisiana.gov/portal/PROGRAMS/MercuryInitiative.aspx>). Cocodrie Lake samples were taken in 2003, 2005 and 2008. The fish Consumption Advisory for Cocodrie Lake, Louisiana was issued on February 11<sup>th</sup>, 2009. This advisory is still in effect. ([APPENDIX VIII](#)).

### Water quality

Water parameters measured at the surface and near the bottom during each standardized sample include temperature, dissolved oxygen, pH, and conductivity.

## BIOLOGICAL

### Fish sampling history

From the 1960's through the early 1980's, rotenone applications were used to determine fish population biomass estimates. From the mid- 1980's to present, techniques have included electrofishing, nets, seines, and water quality testing, which have provided necessary information relative to the management of Cocodrie Lake.

**Note:** All standardized sampling information collected by Inland Fisheries from 1965 through present are computerized. Any data prior to 1965 are in the format of paper documents or reports which are on file at the LDWF District Office in Opelousas.

## Gear

Fish biomass or standing crop (rotenone) samples: Consist of 3 – 4 one-acre block-off net samples taken between the months of May through September. The standard rotenone application rate is three pints of 5% active emulsified rotenone/acre-foot and was the most common fish sampling method until 1988. Since that time, other sampling techniques, as shown in Table 3, including electrofishing, gill and hoop nets and seine hauls have been utilized.

Table 3. Historical, current, and scheduled gear types employed to sample fish populations on Cocodrie Lake, Louisiana from 1971 – 2020.

<b>LDWF SAMPLING EFFORTS</b>	
<b>Year</b>	<b>Sampling Method</b>
1971	Biomass (rotenone)
1978	Biomass (rotenone)
1982	Biomass (rotenone)
1983	Biomass (rotenone)
1992	Electrofishing,
1993	Electrofishing, frame nets
1994	gill nets
1996	Gill nets
1997	Electrofishing
2001	Electrofishing, gill nets
2003	Electrofishing
2004	Gill nets
2005	Electrofishing
2007	Electrofishing
2009	Gill nets
2010	Electrofishing, aquatic type maps
2011	Electrofishing, aquatic type maps
2012	Lead nets
2014	Electrofishing, gill nets, type map
2017	Electrofishing, lead nets, type map
2020	Electrofishing, gill nets, type map

## Lake records

From informal records maintained by LDWF fisheries biologists, the largest bass reportedly caught in Cocodrie Lake was one that weighed 7.2 pounds in 1998.

## Stocking History

Grand total of all fish species stocked from 1977 – 2016 is 1,213,008 fingerlings. Stockings, by species and year, are listed in Table 4.

Table 4. Cocodrie Lake, Louisiana fish stockings, by species and year from 1977 – 2016.

Year	Florida Largemouth Bass	Bluegill	Channel Catfish	Blue Catfish	Black Crappie	Hybrid Striped Bass	Largemouth Bass
1977						55,099	
1978						50,000	
1979						52,128	
1980						50,000	
1981				30,000			
1982				28,034			
1986			44,544	33,454			
1988				49,654			
1992	0	0	45,000	0			
1993	68,657	0	0	0			
1994					168		
1998	0	0	0	10,011			
1999	25,156	9,225	13,096	8,128			
2000	30,757	0	0	0			
2001	48,560	172,016	6,533	0			
2002	24,390	0	25,586	0			
2003	25,270	0	0	0			
2004	48,560						
2007	60,446						
2009	58,486						
2010							10,017
2011		64,328					
2014	65,705						
<b>Totals</b>	<b>455,987</b>	<b>245,569</b>	<b>134,759</b>	<b>159,281</b>	<b>168</b>	<b>207,227</b>	<b>10,017</b>

### Species profile

List of indigenous freshwater fishes known from the Cocodrie Bayou watershed, Louisiana (which is inclusive of Cocodrie Lake) is found in Table 5 below.

Table 5. List of freshwater fishes collected or known to occur from the Cocodrie Bayou watershed.

---

#### Lamprey Family, PETROMYZONTIDAE

Southern brook lamprey, *Ichthyomyzon gagei* Hubbs and Trautman

#### Gar Family, LEPISOSTEIDAE

Spotted gar, *Lepisosteus oculatus* (Winchell)

Shortnose gar, *Lepisosteus platostomus* Rafinesque

#### 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)

Minnnow Family, CYPRINIDAE

Blacktail shiner, *Cyprinella venusta* (Girard)

Common Carp, *Cyprinus carpio* Linnaeus

Cypress minnow, *Hybognathus hayi* Jordan

Mississippi silvery minnow, *Hybognathus nuchalis* Agassiz

Striped shiner, *Luxilus chrysocephalus* Rafinesque

Redfin shiner, *Lythrurus umbratilis* (Girard)

Golden shiner, *Notemigonus crysoleucas* (Mitchill)

Emerald shiner, *Notropis atherinoides* Rafinesque

Blackspot shiner, *Notropis atrocaudalis* Evermann

Iron-colored shiner, *Notropis chalybaeus* (Cope)

Weed shiner, *Notropis texanus* (Girard)

Mimic shiner, *Notropis volucellus* (Cope)

Pugnose minnow, *Notropis emiliae* Hay

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

Sucker Family, CATOSTOMIDAE

Lake chubsucker, *Erimyzon sucetta* (Lacépède)

Bigmouth buffalo, *Ictiobus cyprinellus* (Valenciennes)

Freshwater Catfish Family, ICTALURIDAE

Black bullhead, *Ameiurus melas* (Rafinesque)

Yellow bullhead, *Ameiurus natalis* (Lesueur)

Blue catfish, *Ictalurus furcatus* (Lesueur)

Channel catfish, *Ictalurus punctatus* (Rafinesque)

Black madtom, *Noturus funebris* (Gilbert and Swain)

Tadpole madtom, *Noturus gyrinus* (Mitchill)

Pike Family, ESOCIDAE

Chain pickerel, *Esox niger* Lesueur

Pirate Perch Family, APHREDODERIDAE

Pirate perch, *Aphredoderus sayanus* (Gilliams)

Killifish Family, CYPRINODONTIDAE

Golden topminnow, *Fundulus chrysotus* (Günther)

Blackstripe topminnow, *Fundulus notatus* (Rafinesque)

Blackspotted topminnow, *Fundulus olivaceus* (Storer)

Livebearer Family, POECILIIDAE

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

Least killifish, *Heterandria formosa* Agassiz

Sailfin molly, *Poecilia latipinna* (Lesueur)

Silverside Family, ATHERINIDAE

Brook silverside, *Labidesthes sicculus* (Cope)

Inland silverside, *Menidia beryllina* (Cope)

Sunfish Family, CENTRARCHIDAE

Flier, *Centrarchus macropterus* (Lacépède)

Banded pygmy sunfish, *Elassoma zonatum* Jordan

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 miniatus* (Valenciennes)

Bantam sunfish, *Lepomis symmetricus* Forbes

Florida largemouth bass, *Micropterus floridanus* (Kassler et al.)

Northern largemouth bass, *Micropterus salmoides* (Lacépède)

White crappie, *Pomoxis annularis* Rafinesque

Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Perch Family, PERCIDAE

Scaly sand darter, *Ammocrypta vivax* Hay

Bluntnose darter, *Etheostoma chlorosomum* (Hay)

Creole darter, *Etheostoma collettei* Birdsong and Knapp

Slough darter, *Etheostoma gracile* (Girard)

Cypress darter, *Etheostoma proeliare* (Hay)

Speckled darter, *Etheostoma stigmaeum* (Jordan)

Redfin darter, *Etheostoma whipplei* (Girard)

Logperch, *Percina caprodes* (Rafinesque)

Blackside darter, *Percina maculata* (Girard)  
Dusky darter, *Percina sciera* (Swain)  
Swamp darter, *Percina fusiforme* (Girard)

Drum Family, SCIAENIDAE

Freshwater drum, *Aplodinotus grunniens* Rafinesque

---

Nomenclature and phylogenetic order follows Nelson, *et al.* 2004. Common and Scientific Names of Fishes from the United States, Canada, and Mexico, 6th Edition. American Fisheries Society Special Publication 29. 386 pp. Exceptions are noted.

Genetics

No genetics sampling conducted.

Threatened/endangered/exotic species

No threatened or endangered species documented in Cocodrie Lake to date.

Creel

No creel surveys have been conducted on Cocodrie Lake.

HYDROLOGICAL CHANGES

None

WATER USE

Hunting

Yes

Skiing

No

Scuba Diving

No

Swimming

No

Irrigation

Yes

## **APPENDIX I**

[\(return to General description\)](#)

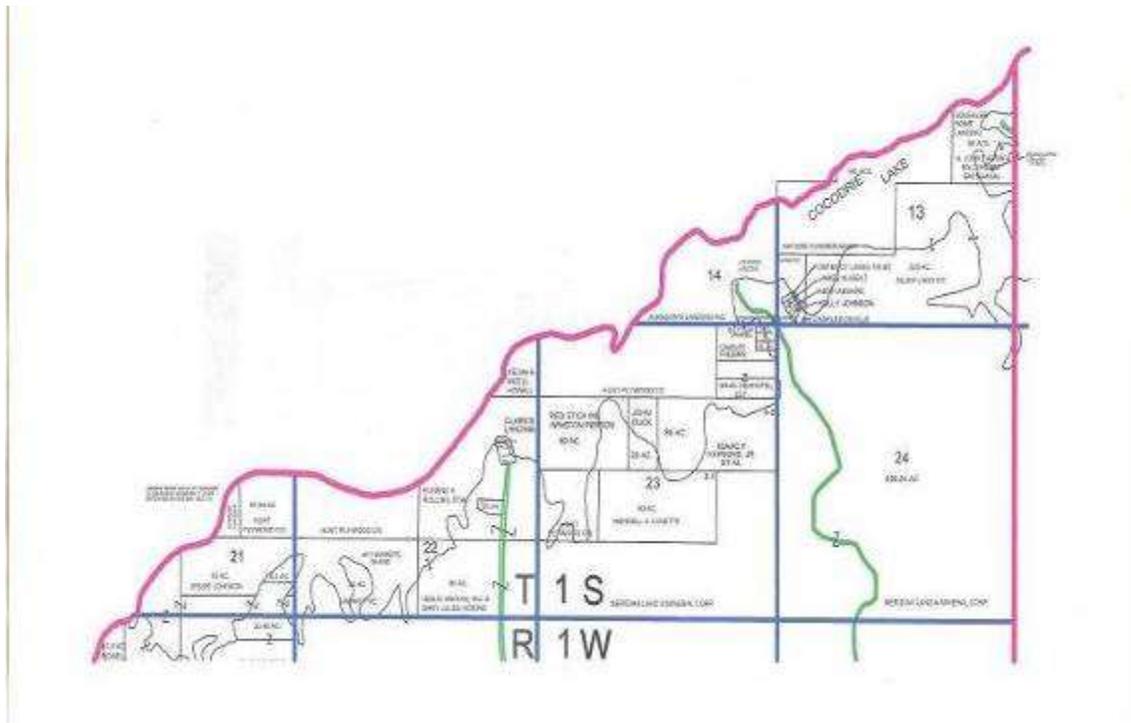
Act No. 38 (House Bill No. 166 of the 1957 Louisiana Legislative Session)

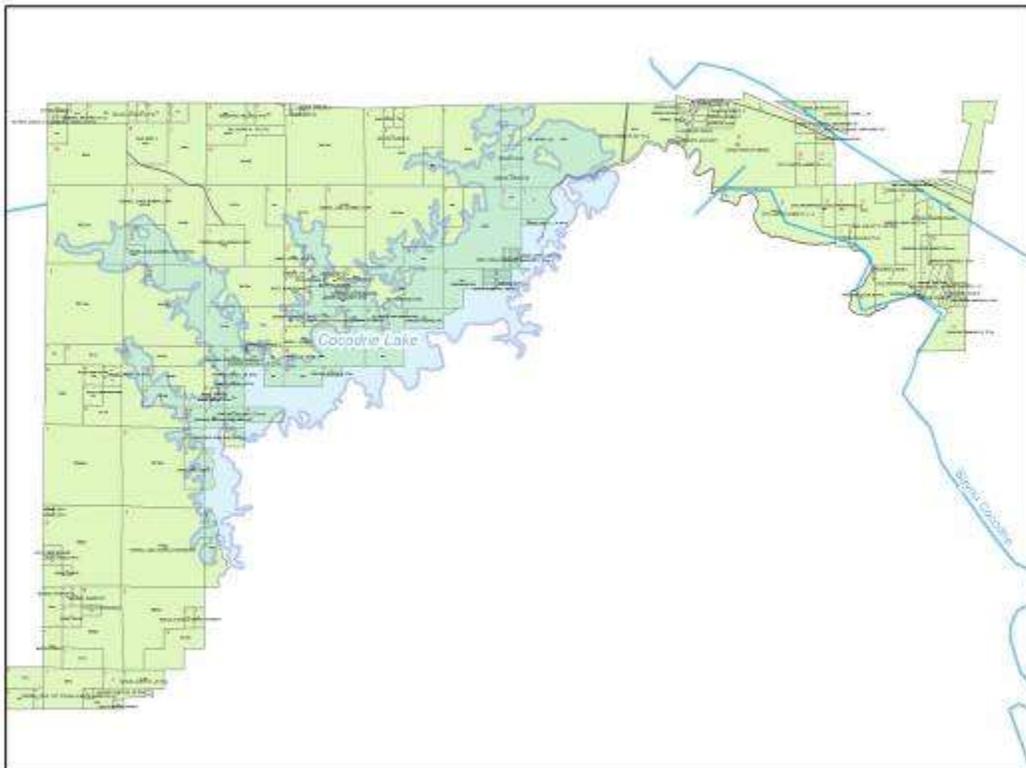
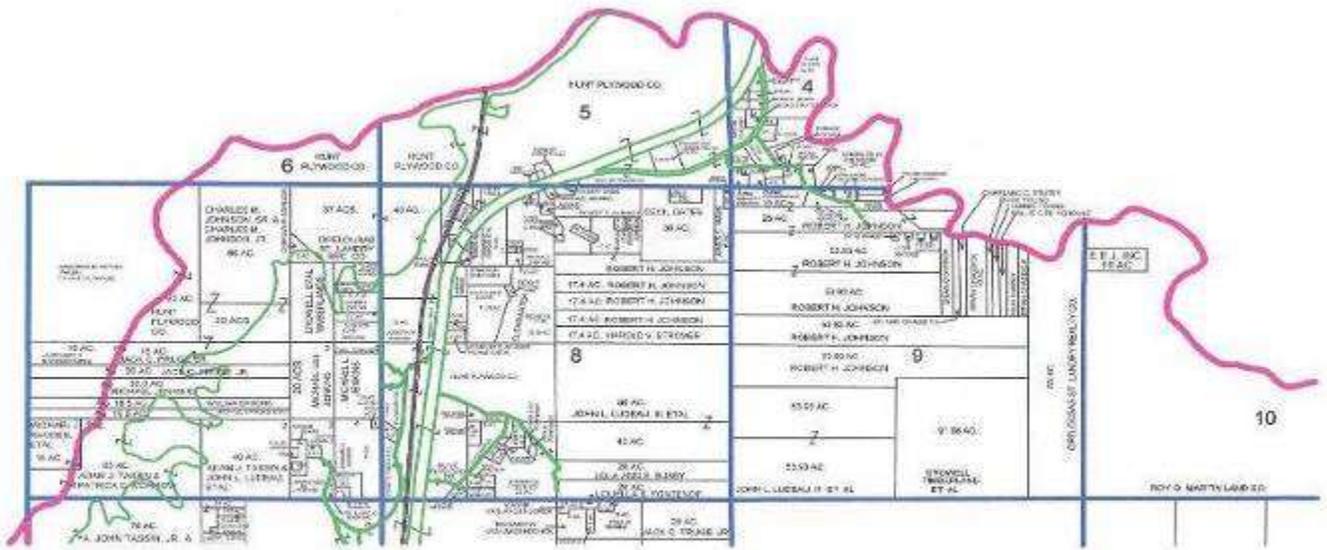
*Section 3.* Notwithstanding any provisions to the contrary contained in this Act, said Commission shall, at all times, except when the established minimum record flow of water in Bayou Cocodrie is decreased in seasons of unusual drought or by other causes beyond human control, operate any dams, spillways, gates, outlets or regulatory devices, or appurtenances constructed in Bayou Cocodrie, or adjacent thereto, with due diligence and in such manner that the established minimum record flow of water in Bayou Cocodrie recorded by the U.S.G.S at the Clearwater, Louisiana, will not be reduced and the riparian rights of the owners of land lying downstream from said dam and spillway and bordering on said bayou safeguarded and preserved.

## **APPENDIX II**

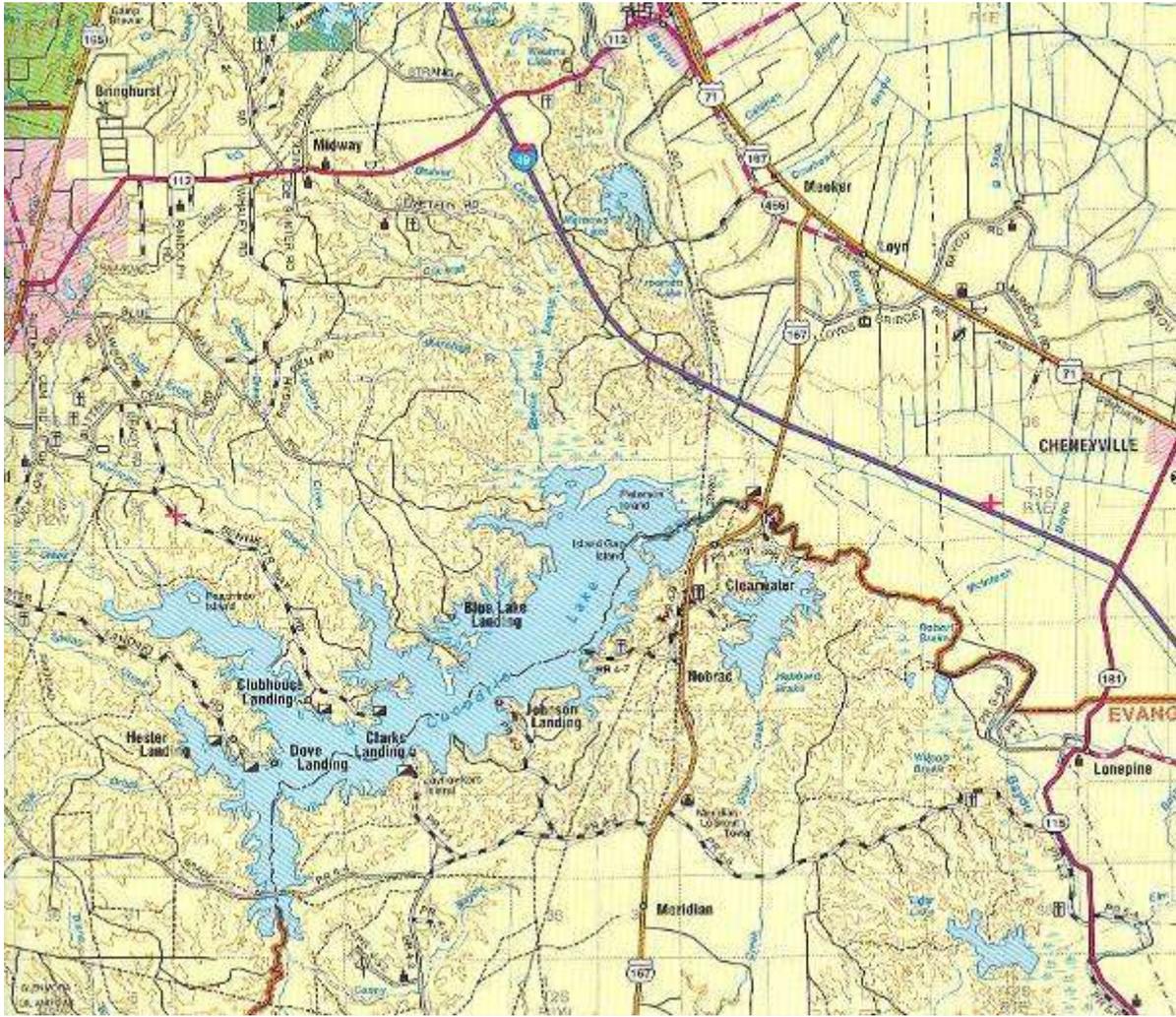
[\(return to impoundment\)](#)

Ownership Maps.





**APPENDIX III**  
**[\(return to parish\)](#)**



**APPENDIX IV**  
**(return to Authorization)**

7-21-7  
FEB-24-2011 12:41

Rapides Parish Police Jury

318 473 6670 P.02

On motion by Mr. Tom Mathews, seconded by Mr. John Christophe, the following ordinance was presented and on vote unanimously adopted:

Resolution

A RESOLUTION ESTABLISHING THE RAPIDES PARISH-EVANGELINE PARISH COCODRIE LAKE FISH AND GAME PRESERVE JOINTLY WITH THE PARISH OF EVANGELINE, CREATING A COMMISSION TO, APPOINTING THREE COMMISSIONERS REPRESENTING RAPIDES PARISH, AND OTHERWISE PROVIDE WITH RESPECT THERETO.

BE IT RESOLVED by the Rapides Parish Police Jury duly assembled in Regular Session convened on the 12th day of September 1989 that:

Section 1. Cocodrie Game and Fish Preserve Established.

By virtue of the authority of the authority conferred by Louisiana Revised Statutes LA R.S. 36:721 et seq. and other constitutional and statutory authority supplemental thereto, there is hereby established a Rapides Parish-Evangeline Parish Cocodrie Lake Fish and Game Preserve, subject to the concurrence of the Evangeline Parish Police Jury.

Section 2. Commission Created.

There is hereby created pursuant to R.S. 36:610 a Rapides Parish-Evangeline Parish Cocodrie Lake Fish and Game Commission. The said Commission shall have all of the powers, duties and functions granted and conferred to game and fish commissions by the statutes of the State of Louisiana in relation to the Rapides Parish-Evangeline Parish Cocodrie Lake Fish and Game Preserve.

Section 3. Appointments.

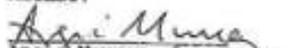
The Rapides Parish Police Jury hereby appoints three (3) citizens and taxpayers to the Rapides Parish-Evangeline Parish Cocodrie Game and Fish Commission, representing Rapides Parish, whose terms shall be concurrent with that of the appointing governing authority, the Rapides Parish Police Jury. One of the three commissioners from Rapides Parish shall be designated by Central Louisiana Electric Company. If a vacancy occurs, it shall be filled for the unexpired term by the body originally making the appointment so vacated. The initial commissioners representing Rapides Parish are: Mr. W. L. Hoyt, Mr. Coy Purkey, and Mr. Kenneth Dickerson (who is the Rapides Parish appointee designated for the Central Louisiana Electric Company).

BE IT FURTHER RESOLVED that the Evangeline Parish Police Jury is urged to concur in this creation and to take action to appoint commissioners to the Commission representing Evangeline Parish, to do any and all things necessary for the conservation, protection and promulgation of game and fish in the Cocodrie Game and Fish Preserve.

THUS PASSED AND ADOPTED on this 12th day of September, 1989.

  
L. B. Henry, President  
Rapides Parish Police Jury

ATTEST:

  
Angie Murray, Secretary  
Rapides Parish Police Jury

TOTAL P.02

LOUISIANA REVISED STATUTES  
TITLE 56. WILDLIFE AND FISHERIES  
CHAPTER 2. WILDLIFE MANAGEMENT AREAS AND REFUGES  
PART 2. PARTICULAR STATE GAME AND  
FISH PRESERVES AND SANCTUARIES

**GO TO LOUISIANA STATUTES ARCHIVE DIRECTORY**

La. R.S. **56:801** (2011)

§ **56:801**. Particular game and fish preserves and commissions recognized and continued

The following preserves and commissions created by the enumerated special statutes, are continued in full force and effect within the Department of Wildlife and Fisheries.

(1) Repealed by Acts 1981, No. 422, § 2; Acts 1991, No. 490, § 1; Acts 1981, No. 858, § 5, effective Jan. 1, 1982.

(2) Bayou Bonne Idee Game and Fish Preserve (Acts 1952, No. 248; Acts 1966, No. 455; Acts 1977, No. 222, § 1).

(3) Bayou Pierre State Game and Fish Preserve (Acts 1934, No. 139; Acts 1946, No. 392; Acts 1977, No. 222, § 1).

(4) Beaugard Old River Fish and Game Preserve (Acts 1958, No. 266; Acts 1966, No. 455; Acts 1977, No. 222, § 1).

(5) Black Bayou Game and Fish Preserve (Acts 1940, No. 39; Acts 1957, No. 689; Acts 1977, No. 222, § 1).

(6) Bundicks Game and Fish Preserve (Acts 1956, No. 33; Acts 1966, No. 455; Acts 1977, No. 222, § 1).

(7) Catahoula Lake Game and Fish Preserve (Acts 1952, No. 320; Acts 1966, No. 455; Acts 1974, No. 434; Acts 1977, No. 222, § 1)

(8) Cheniere Brake Fish Preserve (Acts 1949, No. 88; Acts 1977, No. 222, § 1).

(9) Cocodrie Lake Game and Fish Preserve (Acts 1957, No. 38; Acts 1966, No. 455; Acts 1977, No. 222, § 1).

(10) Concordia Lake Game and Fish Preserve (Acts 1974, No. 434; Acts 1977, No. 222, § 1)

(11) Corne Lake Game and Fish Preserve (Acts 1934, No. 190; Acts 1977, No. 222, § 1).

(12) Hard Water State Game and Fish Preserve (Acts 1969, No. 560; Acts 1977, No. 222, § 1).

LOUISIANA REVISED STATUTES  
TITLE 36. ORGANIZATION OF THE EXECUTIVE BRANCH OF STATE GOVERNMENT  
CHAPTER 13. DEPARTMENT OF WILDLIFE AND FISHERIES

**GO TO LOUISIANA STATUTES ARCHIVE DIRECTORY**

La. R.S. **36:610** (2011)

**§ 36:610. Transfer of agencies and functions to Department of Wildlife and Fisheries**

A. The transfers hereinafter made in this Section shall be effective as provided in Chapter 24 of this Title.

B. The following agencies, as defined in R.S. 36:3, are transferred to and hereinafter shall be within the Department of Wildlife and Fisheries, as provided in R.S. 36:802.

(1) The Wildlife and Fisheries Commission (Article IX, Section 7 of 1974 Louisiana Constitution; R.S. 34:341-34:343; R.S. 56:1-56:28; 56:61-56:801; 56:1437; 56:1452; 56:1464-56:1464.4).

(2) Gulf States Marine Fisheries Commission (R.S. 56:71 et seq.)

(3) Northwest Louisiana Game and Fish Preserve (Act No. 191 of 1926 Regular Session, as amended).

(4) Jatt Lake State Game and Fish Preserve (Act No. 27 of 1940 Regular Session, as amended, and Act 244 of the 1962 Regular Session).

(5) Saline Lake Game and Fish Preserve (Act No. 105 of 1976 Regular Session, as amended).

(6) Nantachie Lake State Game and Fish Preserve (Act No. 440 of the 1966 Regular Session, as amended).

(7) The Oyster Task Force (R.S. 56:421).

(8) The Crab Task Force (R.S. 56:331).

(9) The Mullet Task Force (R.S. 56:333.2).

(10) Louisiana Environmental Education Commission (R.S. 30:2503).

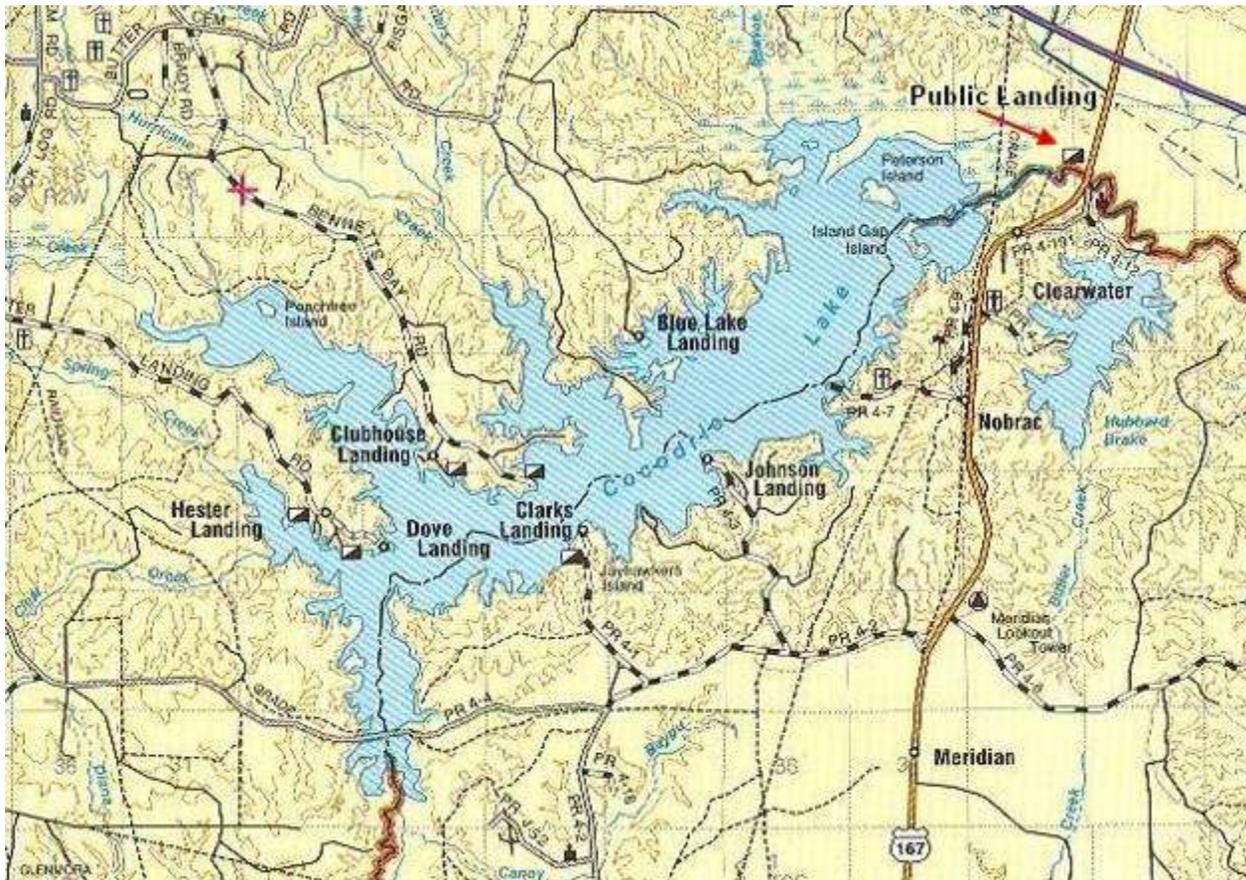
(11) The Shrimp Task Force (R.S. 56:494)

C. Notwithstanding any provisions of R.S. 56:801 to the contrary, the game and fish commissions created by the following Acts, as amended, are hereby abolished, and their powers, duties, functions, and responsibilities are transferred to the secretary of the Department of Wildlife and Fisheries and hereafter shall be exercised and performed as provided in Part IV of Chapter 22 of this Title, and the game and fish preserves created by the following Acts, as amended, are hereby placed within the

---

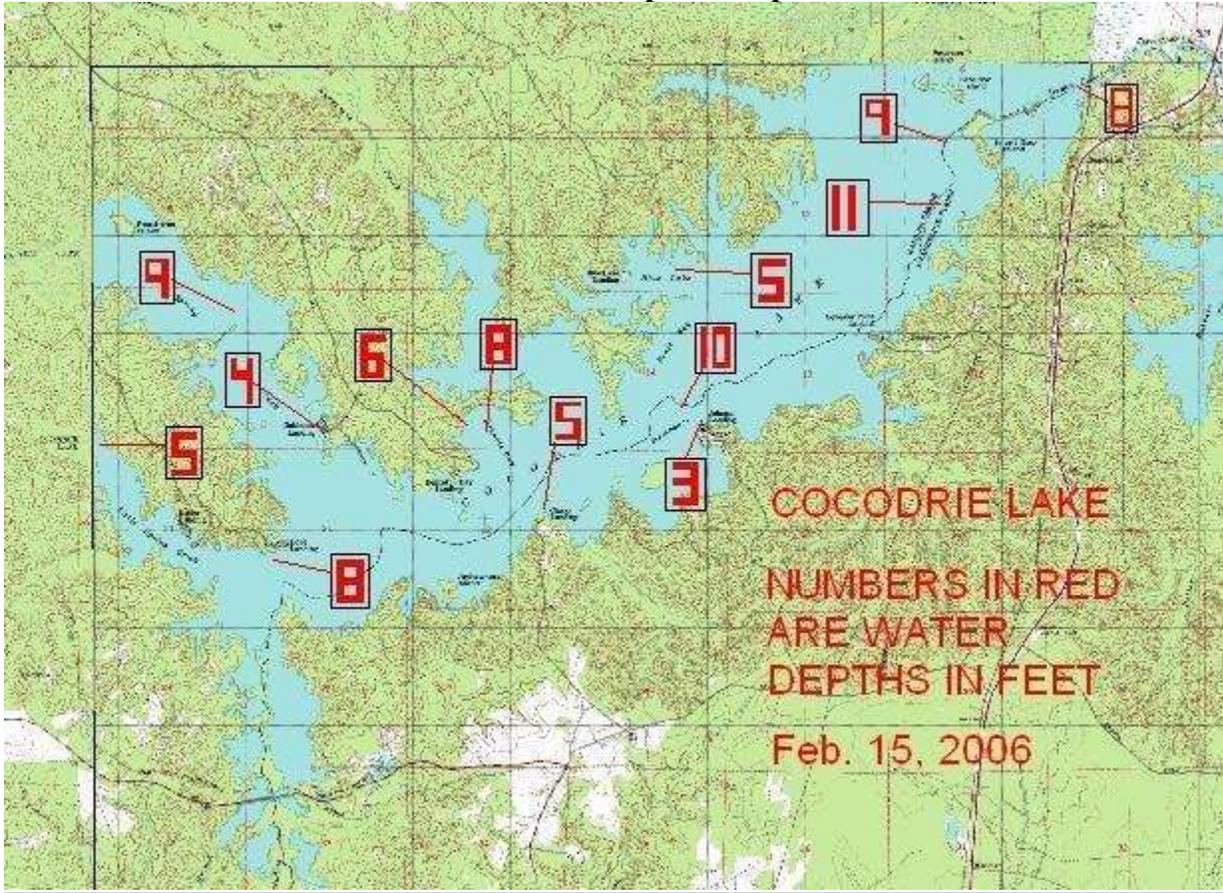
**APPENDIX V**  
**[\(return to Access\)](#)**

Cocodrie Lake Location Map with boat ramps.



**APPENDIX VI**  
**([return to Access](#))**

**Cocodrie Lake Map with depths.**



**APPENDIX VII**  
[\(return to type map\)](#)

Survey of Aquatic Vegetation in Cocodrie Lake 8/20/14

Personnel : M. Plonsky, P. Allemond

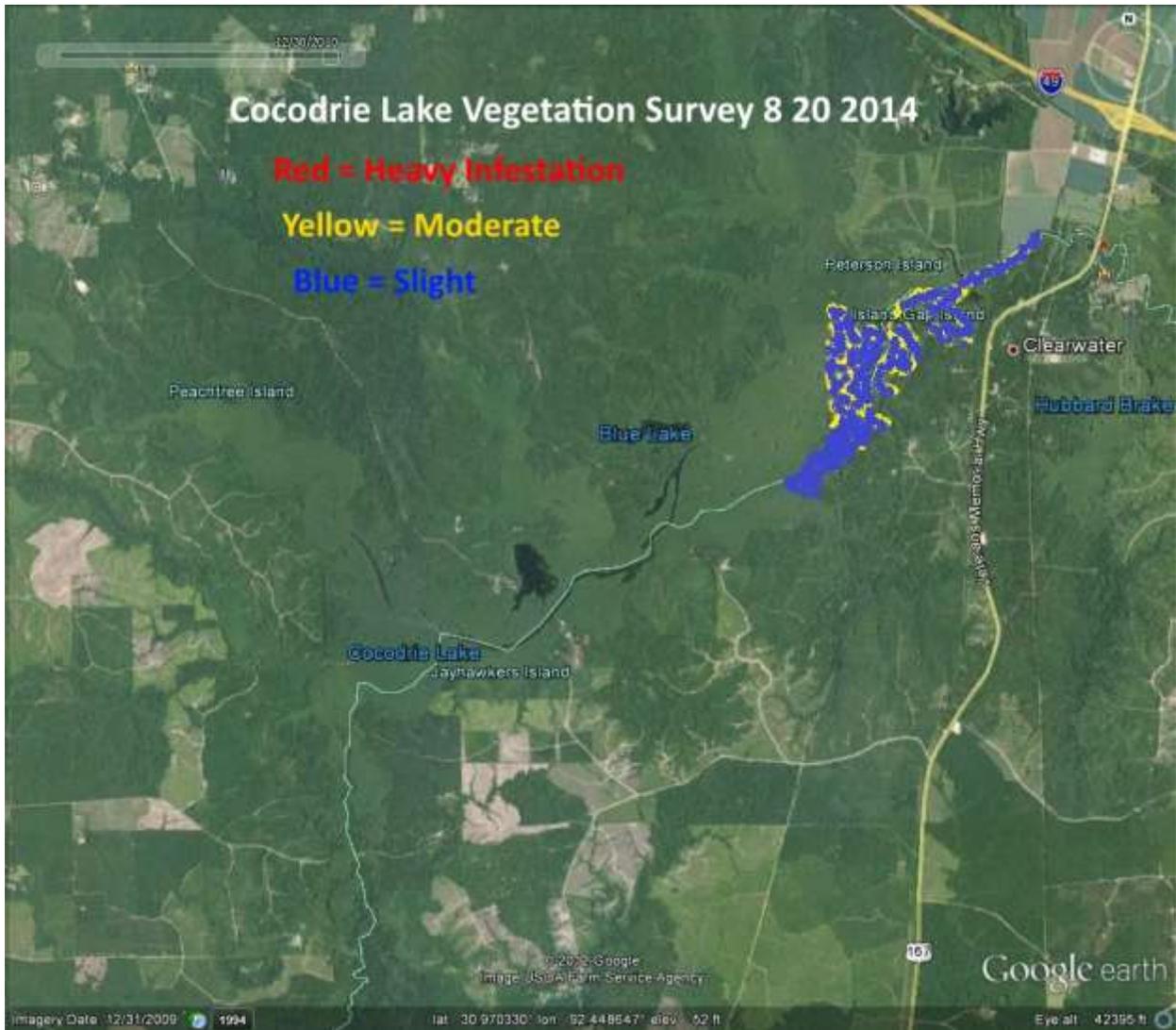
Submitted by : M. Plonsky

A survey of aquatic vegetation present in Cocodrie lake was conducted on 8/20/14. Sparse incidences of aquatic vegetation were seen with the bulk if not entire aquatic vegetation present being observed in the eastern end of the lake. Although the lake spillway is on the eastern end of the lake and the water of the lake was high enough to pour over by about 5 inches, the vegetation observed was not adjacent to the spillway but still many bends up current in the lake. Vegetation types seen in this area were water hyacinth, thin amounts of common salvinia, water primrose, fanwort, American lotus, pickerel weed and duck potato growing along the banks. The majority of the vegetation seen in this eastern end of the lake was water hyacinth at about 75% of observed coverage. The remaining 25% can be split between the remaining vegetation types. **No Giant Salvinia observed.**

As I moved into the lake from east to west, vegetation amounts thinned to very little to eventually zero at the halfway distance between the east end spillway and Johnson's boatlaunch. The remaining lake area was virtually clear of all aquatic vegetation with little to no common salvinia observed except for very trace amounts of fresh green salvinia found hugging the base of some of the lake's flooded tupelo trees. These flooded tupelo and bald cypress comprise most of all of the lake watered area. At the time of this survey, the leaves of the tupelo were still green and on the tree. Patches of blue green algae were observed in Blue Lake. This has been observed in this area since the fall of 2012.

Water qualities throughout the lake were dismal. There was little dissolved oxygen with the highest reading being at the surface of Blue Lake with a reading of slightly greater than 2.0 mg/l. **Swamp gas(methane) could be seen bubbling in many location in the lake as well as a prevalent rotten egg smell. No dead fish were seen.** A table of lake water qualities as measured by a YSI 6600 sonde are below. Lake water alkalinity was very low, below 30 mg/l CaCO3. A map of observed vegetation amounts is below.

Date	Temp	SpCond	Cond	Salinity	Depth	pH	pHmV	Turbidity+	Chlorophyl	Percent d.o.	D.O. mg/l	Location
08/20/14	25.00	0.057	57.0	0.03	8.358	7.69	-40.8	9.3	12.3	9.50	0.79	spillway
08/20/14	25.64	0.053	54.0	0.02	0.075	6.85	8.6	10.4	11.4	5.80	0.47	spillway
08/20/14	23.34	0.072	69.0	0.03	8.891	6.49	29.7	45.0	18.9	8.50	0.72	buckhorn
08/20/14	25.27	0.057	57.0	0.03	0.237	6.49	30.0	8.2	8.5	7.10	0.59	buckhorn
08/20/14	27.27	0.052	54.0	0.02	2.204	6.56	26.0	10.7	16.5	13.50	1.07	bennet's bay
08/20/14	27.79	0.052	55.0	0.02	0.161	6.40	35.8	9.4	24.9	16.30	1.28	bennet's bay
08/20/14	26.35	0.057	58.0	0.03	2.485	6.36	38.2	19.0	32.5	6.70	0.54	blue lake
08/20/14	27.34	0.051	53.0	0.02	0.304	6.27	43.2	12.8	34.0	26.40	2.09	blue lake



**APPENDIX VIII**  
**(return to contaminants)**



Alan Levine  
Secretary  
Department of  
Health & Hospitals  
P. O. Box 629  
Baton Rouge, LA  
70821-0629

Harold Leggett, PhD  
Secretary  
Department of  
Environmental Quality  
P. O. Box 4301  
Baton Rouge, LA  
70821-4301

Robert Barham, MS  
Secretary  
Department of  
Wildlife & Fisheries  
P. O. Box 98000  
Baton Rouge, LA  
70898-9000

*The following fish consumption advisory was issued on 2/11/2009 by the Department of Health & Hospitals, the Department of Environmental Quality, and the Department of Wildlife & Fisheries. For more information, please contact:*

**DHH**  
Adrienne Katner  
(888) 293-7020

**DEQ**  
Chris Piehler  
(225) 219-3615

**DWF**  
Mike Wood  
(318) 343-4045

**FISH CONSUMPTION ADVISORY FOR COCODRIE LAKE  
(EVANGELINE & RAPIDES PARISHES)**

In response to recent sampling and analysis of fish-tissue mercury data, the Louisiana Department of Health & Hospitals (DHH), Department of Environmental Quality (DEQ), and Department of Wildlife & Fisheries (DWF) are issuing an advisory for Cocodrie Lake (Evangeline and Rapides Parishes) where unacceptable levels of mercury have been detected in largemouth bass, bigmouth buffalo, bowfin (choupique, grinnel), and black crappie.

DHH, DEQ and DWF advise that the following precautions be taken when eating fish taken from Cocodrie Lake:

- **Women of childbearing age and children less than seven years of age should consume no more than SIX MEALS PER YEAR of bowfin (choupique, grinnel), or no more than ONE MEAL PER MONTH of largemouth bass, black crappie, or bigmouth buffalo combined, from the advisory area. (A meal is considered to be half a pound of fish for adults and children.)**
- **Other adults and children seven years of age and older should consume no more than TWO MEALS PER MONTH of bowfin, or no more than THREE MEALS PER MONTH of largemouth bass or bigmouth buffalo combined, from the advisory area. (A meal is considered to be half a pound of fish for adults and children.)**

Louisiana fish consumption advisories are based on the estimate that the average Louisiana resident eats four fish meals per month (1 meal = ½ pound). Adults that eat more than four meals of fish a month, and women of child-bearing age and children that eat more than one meal of fish a month from local waterbodies, might increase their health risks. You can contact the Office of Public Health toll free at 1-888-293-7020 for more information about eating fish that contain chemicals.

Mercury is an element that occurs naturally in the environment. It is released into the environment through natural processes and human activities. Consequently, there are small amounts of mercury in lakes, rivers, and oceans. Here, the mercury is turned into methylmercury, a form that is particularly harmful to an unborn baby or young child. Fish absorb methylmercury as they feed on aquatic organisms. Nearly all fish contain trace amounts of methylmercury. Larger fish, especially those that feed on other fish, contain more methylmercury than smaller fish. Therefore, in general, it is recommended that smaller fish be consumed instead of larger ones.

People are exposed throughout their lives to low levels of mercury. One way they can be exposed to mercury is from eating contaminated fish. Pregnant women can pass mercury from the fish they eat to their unborn babies, and nursing mothers can pass the mercury to their infants through their breast milk. Health effects from harmful levels of mercury can include nervous system and kidney damage. Developing fetuses are more sensitive to the toxic effects of mercury, especially in the first trimester of pregnancy. In addition to developing fetuses, infants and children are more sensitive to the effects of mercury; therefore, consumption advisories are issued at lower fish tissue concentration levels for these groups.

This advisory is issued as a precaution. Further sampling will be carried out by DEQ to determine the need for modifications to this advisory, including an adjustment of the boundaries if necessary. If you have consumed species under advisory from these waters, it is not likely that there is an immediate need to be concerned about the effects of mercury. However, you should consult your personal doctor if you are concerned.

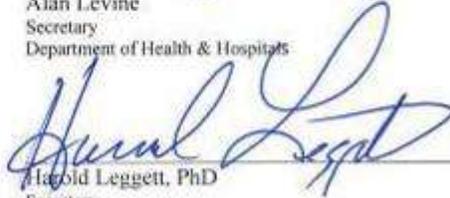
  
\_\_\_\_\_  
Jimmy Guidry, MD  
State Health Officer and Medical Director  
Department of Health & Hospital



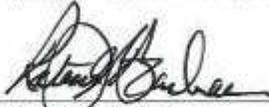
M. Rony Francois, MD, MSPH, PhD  
Assistant Secretary, Office of Public Health  
Department of Health & Hospitals



Alan Levine  
Secretary  
Department of Health & Hospitals



Harold Leggett, PhD  
Secretary  
Department of Environmental Quality



Robert Barham, MS  
Secretary  
Department of Wildlife & Fisheries