LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

PART VI –C (ARCHIVES)

WATERBODY MANAGEMENT PLAN SERIES

COCODRIE LAKE

AQUATIC VEGETATION TYPE MAPS
AND NARRATIVES – 2016

Cocodrie Lake vegetative narratives and type maps – 1994-2012.

State of Louisiana

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COCODRIE LAKE TYPEMAP
9/21/94

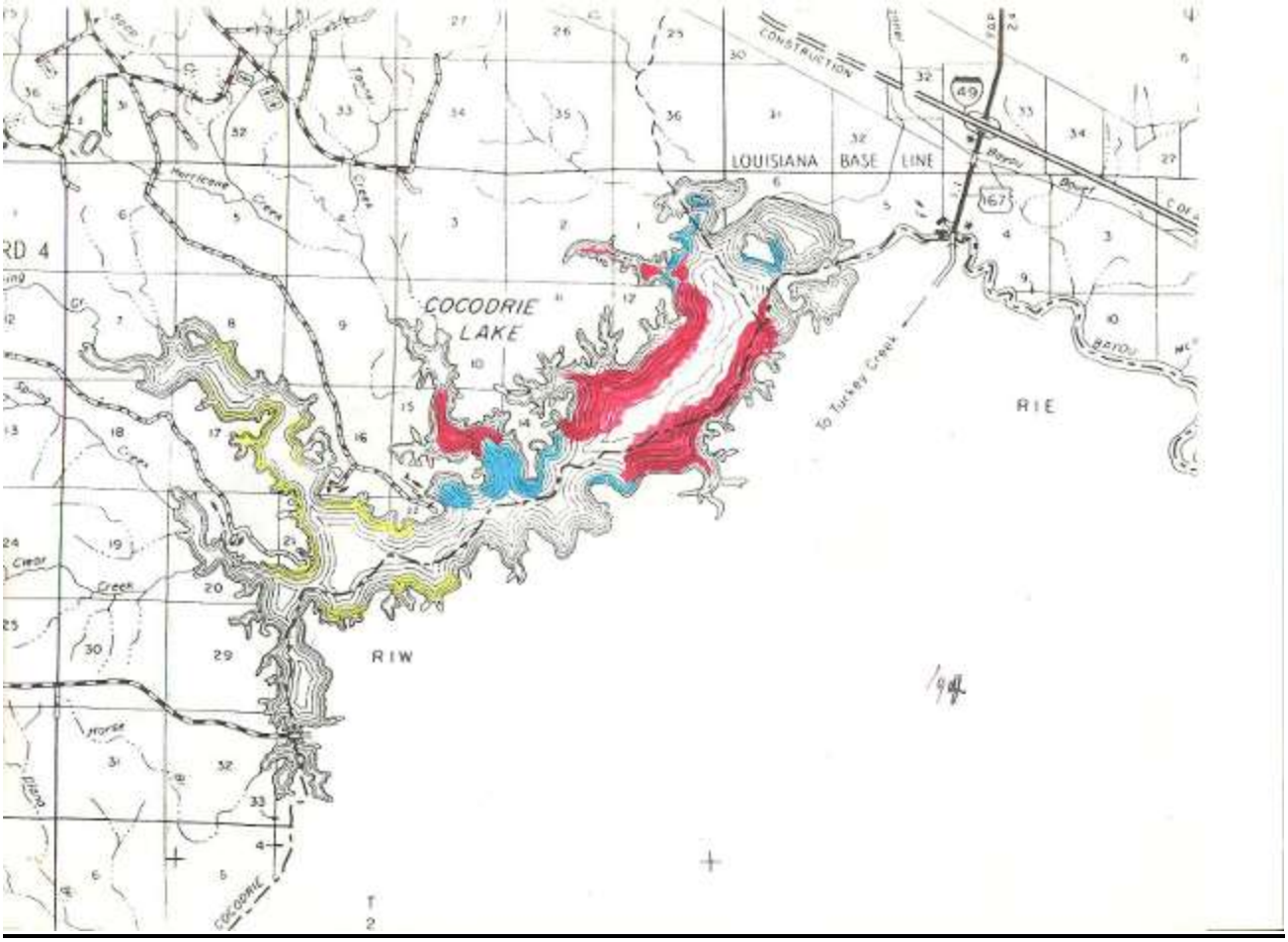
A survey was made of Cocodrie Lake in Baptiste and Evangeline parishes on September 21st to evaluate aquatic weed infestations. The major boat lanes and most of the shoreline areas were open to boating and fishing. Problems were found in the shallow water bay and cypress-tupelo swamp areas.

The cypress-tupelo flooded sections on the east end of Cocodrie Lake had a severe infestation of water hyacinth. In this part of the lake, duck hunters seemed to be affected most by the dense growth of plants. Hyacinth also lined the channel from Johnson's Landing to the dam along Hwy. 147.

The bay waters on the north side of Cocodrie lake had a moderate to severe infestation of coontail, and bladderwort restricting boating and fishing in these areas.

In summary, a significant portion of Cocodrie lake was open to water related recreation. The major hyacinth problems were in remote sections of the swamp where water depths ranged two to three feet and the bottom was littered with tree stumps, limbs, and other debris making travel by conventional boat almost impossible. Submergent weed problems were light along the shoreline and no water hyacinth plants were found in the western one-half of Cocodrie lake.

Malcolm Foster


COCODRIE
LAKE
LOUISIANA BASE LINE
CONSTRUCTION
49
167
Turkey Creek
RIE
RIW
T
2

COCODRIE LAKE TYPEMAP
October 19, 1995

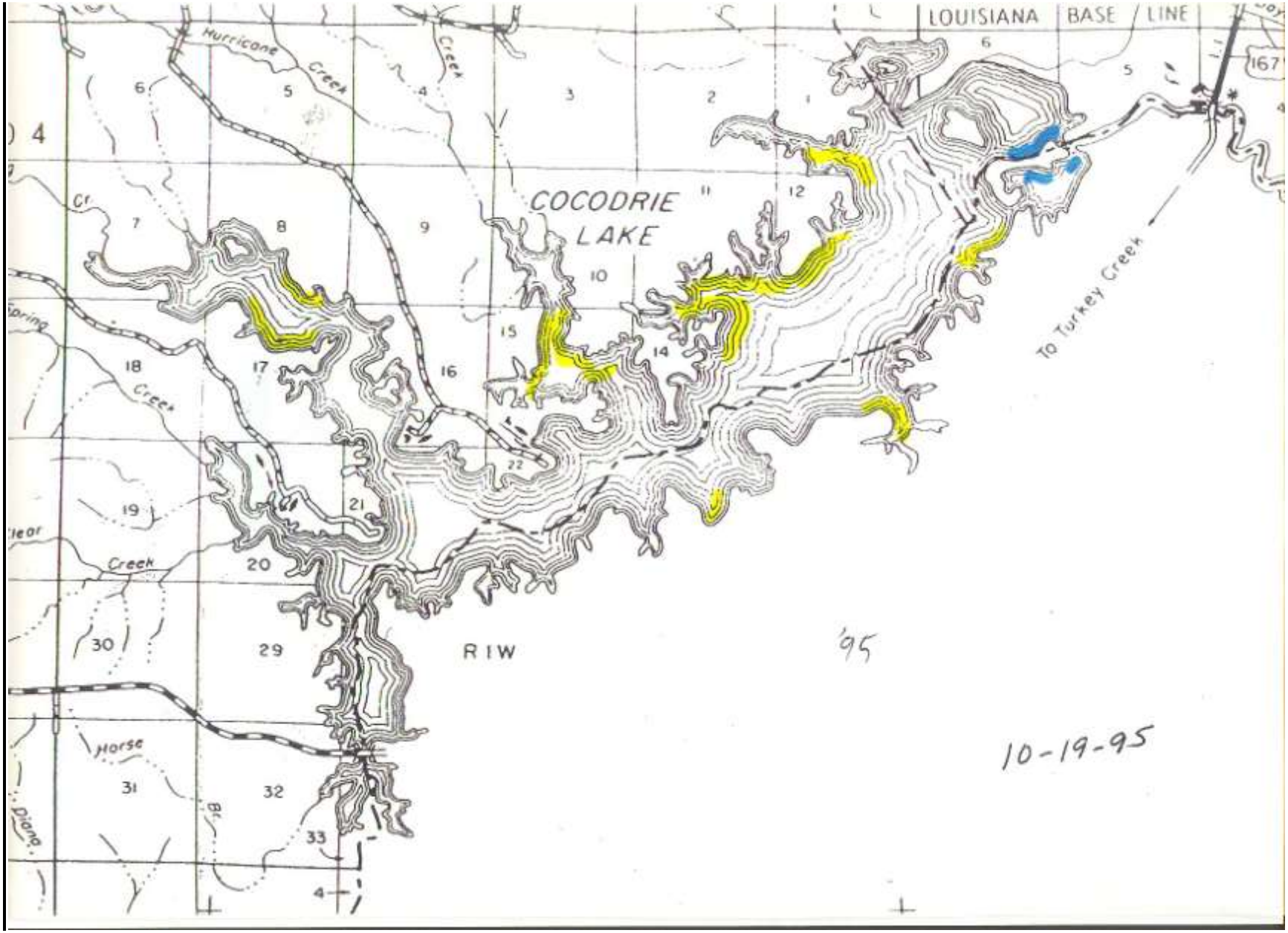
Cocodrie Lake was surveyed October 18, 1995. No serious water weed problems existed in Cocodrie Lake at the time of this visit. Water weed problems were dramatically improved over the 1994 survey period.

In April of 1995 there was an unusually high water situation in Cocodrie Lake. This may have been a significant factor in reducing the overall weed problems.

During this survey, all coves and backwater areas were completely accessible by boat and a number of fisherman were taking advantage of the improved conditions. Free floating coontail and bladderwort sprigs were observed from time to time with an occassional patch of coontail several yards in diameter. The infestation of submergents was very light and at no time posed a problem to water recreation activities.

Water hyacinth were not present in the main body of the lake. These plants were found in the backwater areas along the old channel of Cocodrie bayou where it leaves the lake. Water hyacinth was the dominant aquatic weed, but these plants were restricted to shallow backwater areas which were unusable. One interesting observation was the high population of weevils found on these plants. All of the water hyacinth plants had a very large number of feeding spots on the leaves and at the base of each leaf. These weakened plants had browned out leaves apparently caused from a secondary fungal infection.

Malcolm L.


LOUISIANA BASE LINE
Hurricane Creek
COCODRIE LAKE
To Turkey Creek
Horse
RIW
'95
10-19-95

COCODRIE LAKE
Survey and Type Map
1998

Cocodrie Lake is located in Rapides and Evangeline parishes. Cocodrie is one of the major inland freshwater lakes in north Louisiana and is approximatelly 6,100 acres in size according to records of the Louisiana Department of Agriculture and Forestry.

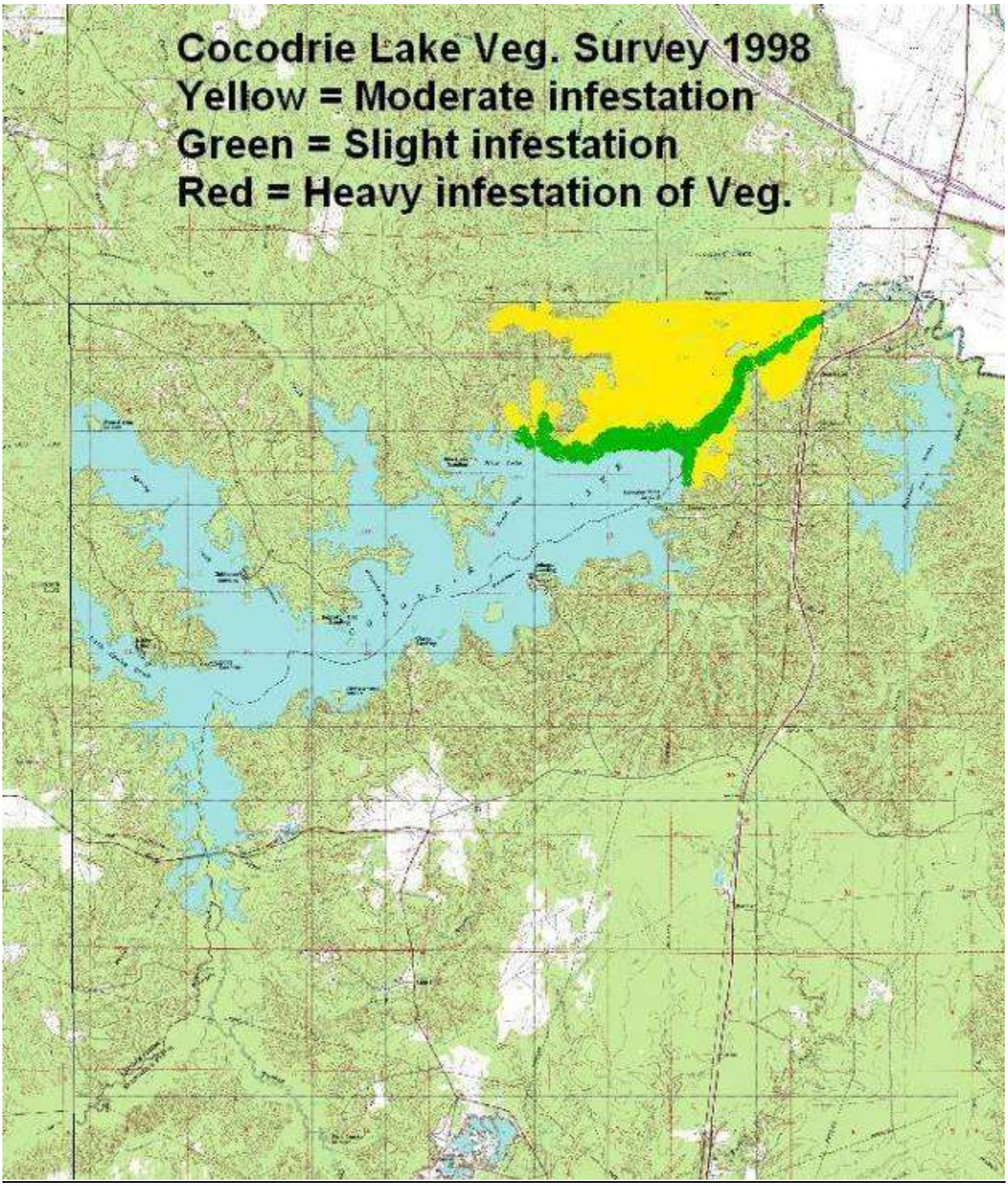
In late June, 1998 the gates were opened on Cocodrie lake to lower water levels for aquatic vegetation control. The pool level of the lake is 51.0 feet msl. Drought conditions during the summer allowed water levels to reach a low of 45.5 msl on August 28th exposing the "flats" to excellent drying. The gates were closed on September 16th and the lake rapidly returned to pool stage.

The southwestern 3/4ths (upper end) of the lake was in excellent condition and no floating aquatic plants were observed during the survey in this area. The waters around Clark's landing, Buck's landing, Bennetts Bay, and the main body of the lake were all problem free. Smartweed, buttonbush, and a few marginal aquatic grasses were found around the lake margin and in shallow backwater areas. Occassionally, a sprig or two of coontail or bladderwort could be seen floating near the surface. No submerged aquatics were brought to the surface in this area as a result of random drag sample efforts.

The northeastern 1/4th (lower end) of the lake supported a moderate infestation of water hyacinth, Eicchornia crassipes, and salvinia, Salvinia rotundifolia. These plants were found in the area of flooded tupelo gum and cypress on both sides of the channel leading to the dam. Infestations of coontail, cabomba, and bladderwort were light in this section of the lake.

In summary, approximately 75% of Cocodrie lake was free of aquatic plant growth. The major aquatic plant problem was water hyacinth which was found only in the lower end of the lake in tree studded areas difficult to reach by boat. The salvinia infestation was also confined to the lower end of the lake. Salvinia was widely scattered in this area and is currently not causing a problem. Submergent weeds were the least abundant of all aquatic vegetation in the entire lake and posed no problems.

Malcolm Leatherman, Biologist
October 19, 1998


Cocodrie Lake Veg. Survey 1998
Yellow = Moderate infestation
Green = Slight infestation
Red = Heavy infestation of Veg.

Cocodrie Lake
October 1999
Charles N. Dugas

Cocodrie Lake, Evangeline and Rapides Parishes, was surveyed for the presence of aquatic vegetation on October 21, 1999.

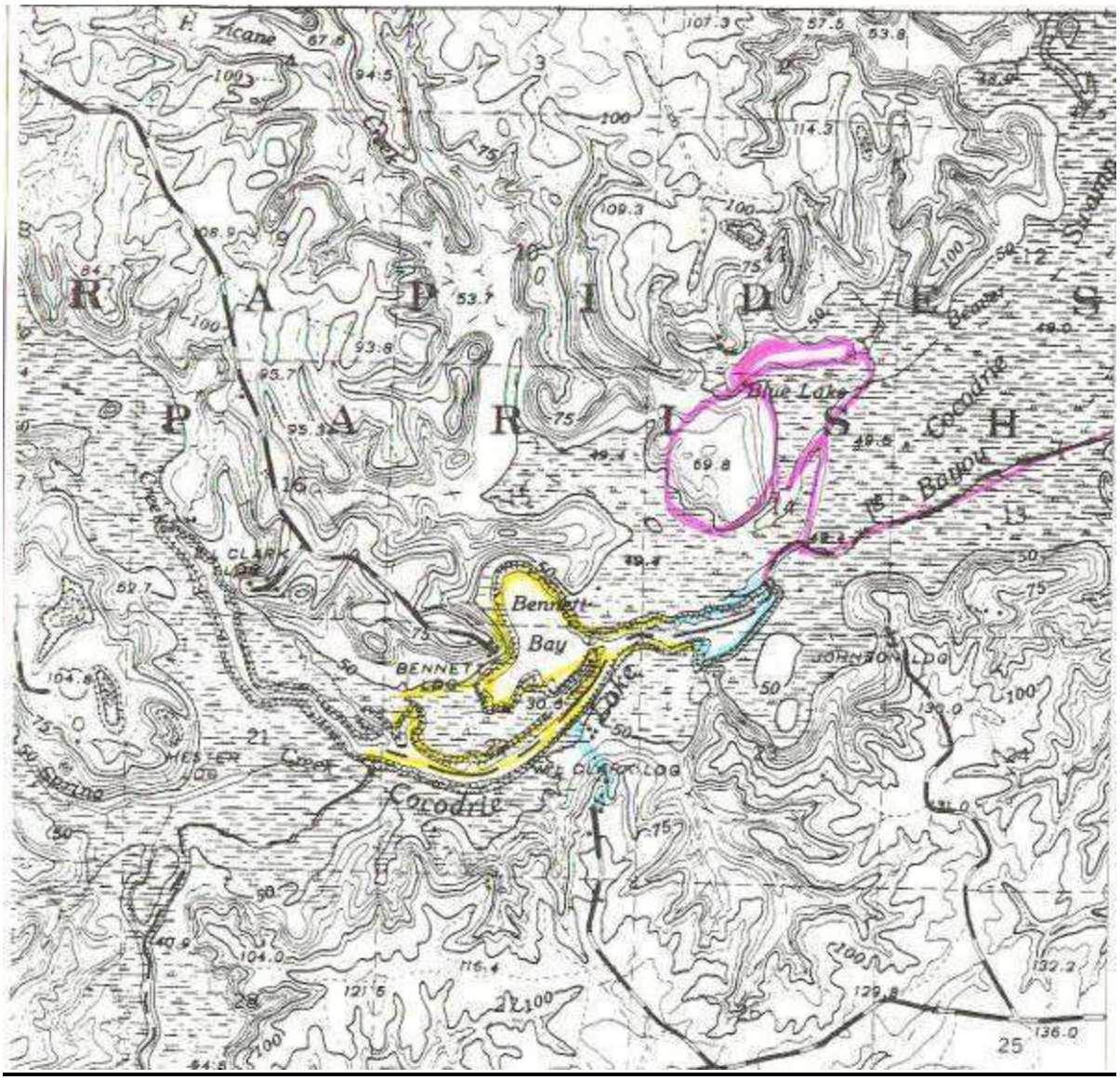
The lake level rose four feet to pool stage during the two weeks before this survey. Therefore, there was very little aquatic vegetation observed. Near Clark's Landing, a few sprigs of parrot's-feather (*Myriophyllum aquaticum*) were observed. Also, in Bayou Cocodrie near the spillway there were light infestations of coontail (*Ceratophyllum demersum*).

Cocodrie Lake
October 2003
Karl A. Mapes

Cocodrie Lake, Evangeline and Rapides Parishes, was surveyed for the presence of aquatic vegetation on October 21, 2003.

The heavy occurrence of coontail, Ceratophyllum demersum, was to be found throughout the lake with dense amounts of common slavinia, Salvinia minima floating on top. Water hyacinth Eichhornia crassipes was found on the spillway end of Bayou Cocodrie along with American lotus Nelumbo lutea. Trace amounts of bladderwort, Utricularia sp., were found at Clark's landing and parrot's feather, Myriophyllum aquaticum was found at Clark's landing and the spillway end of Bayou Cocodrie.

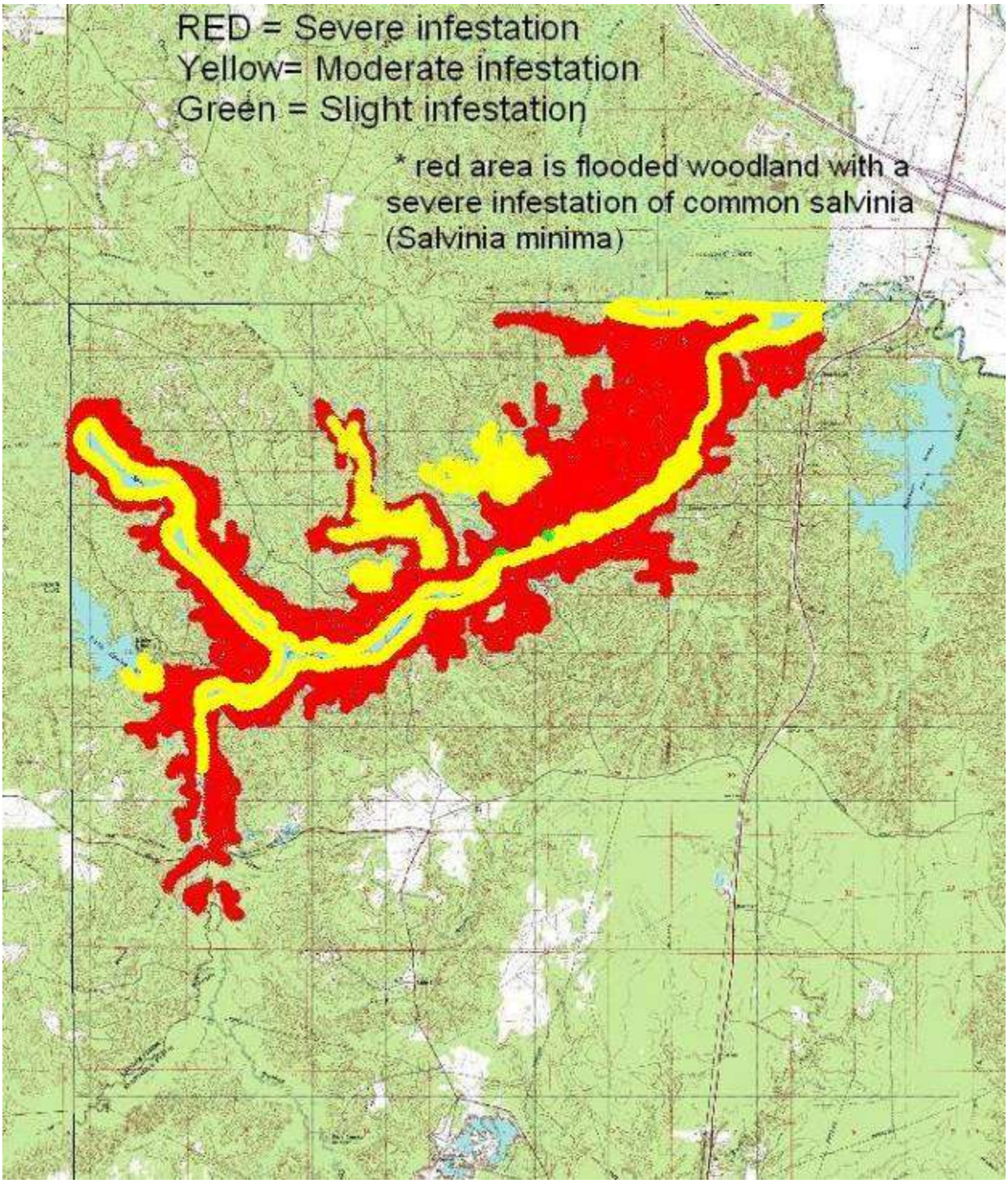
This appears to be the first survey taken since 2000. Coontail was found in the channel of Bayou Cocodrie in 11-12 feet depths. The turbidity remains at 3 feet.


R. Teche
PARISH
Blue Lake
Crocodile Bayou
Bennett Bay
BENNETT LOG
CLARK LOG
JOHNSON LOG
Crocodile
Lake
Creek
25

2005 Aquatic Vegetation Survey
Cocodrie Lake Sep. 23

Field personnel: M. Plonsky
J. David
Report by: M. Plonsky

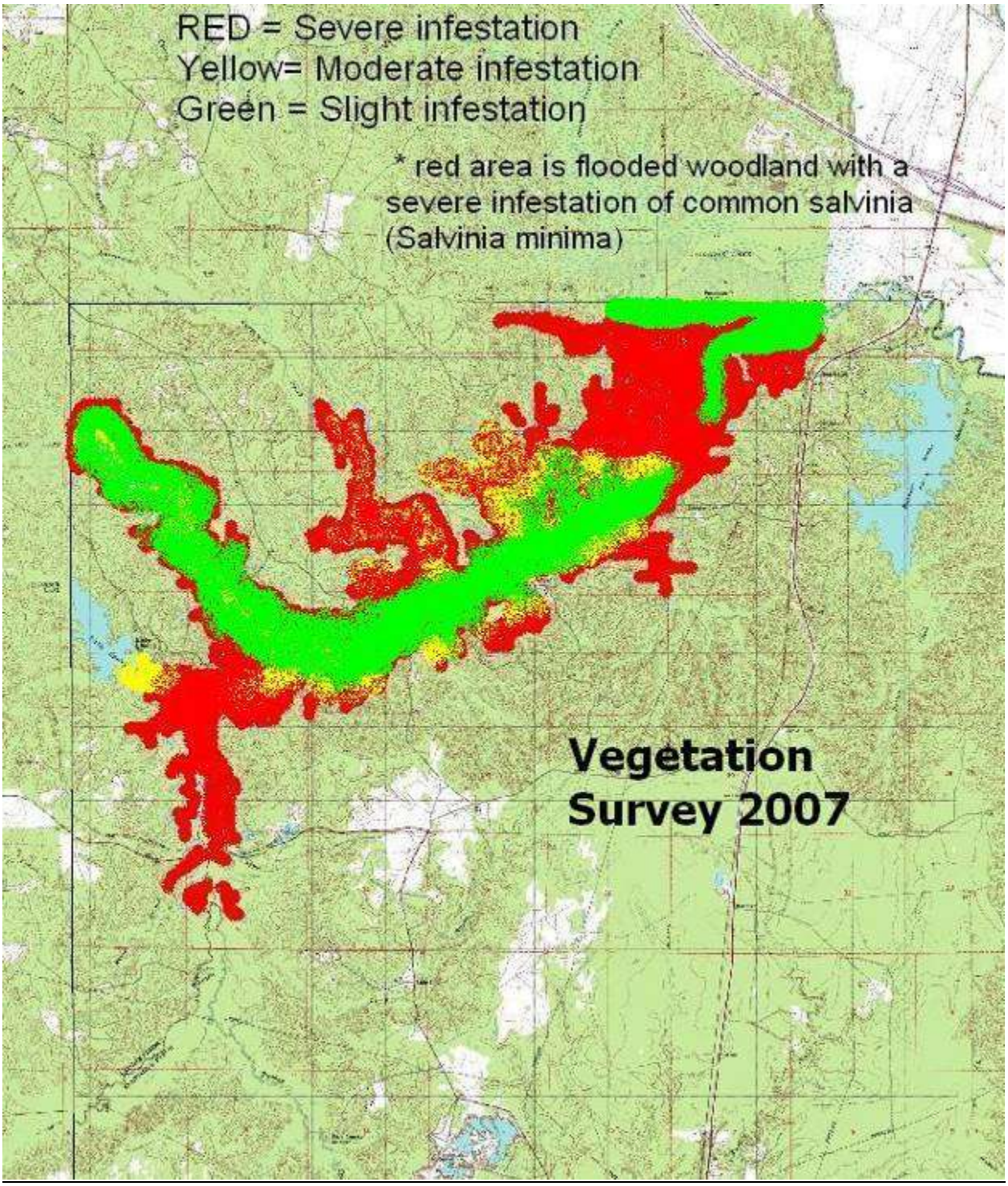
Cocodrie Lake is close to completely covered with common salvinia (*Salvinia minima*) this year. Areas of the lake where common salvinia are not found include the center of the main channel and center locations of Bennett's bay and blue hole. All flooded woodland areas of the lake contain copious amounts of common salvinia and is marked red on the attached map. Other vegetation observed include Common bladderwort (*Utricularia vulgaris*), Cabomba (*Cabomba caroliniana),* Coontail (*Ceratophyllum demersum*), Parrot feather (*Myriophyllum brasiliensis*), Primrose (*Ludwigia* spp.) and White water lily (Nymphaea odorata). This vegetation is found in the large shallow coves surrounding the deeper center channel and is marked yellow on the attached map. Small amounts of water-milfoil (*Myriophyllum spicatum*) were seen on the edge of the center channel and this is marked green on the attached map.


RED = Severe infestation
Yellow= Moderate infestation
Green = Slight infestation
* red area is flooded woodland with a severe infestation of common salvinia (Salvinia minima)

2007 Aquatic Vegetation Survey
Cocodrie Lake

Field personnel: M. Plonsky
J. David
Report by: M. Plonsky

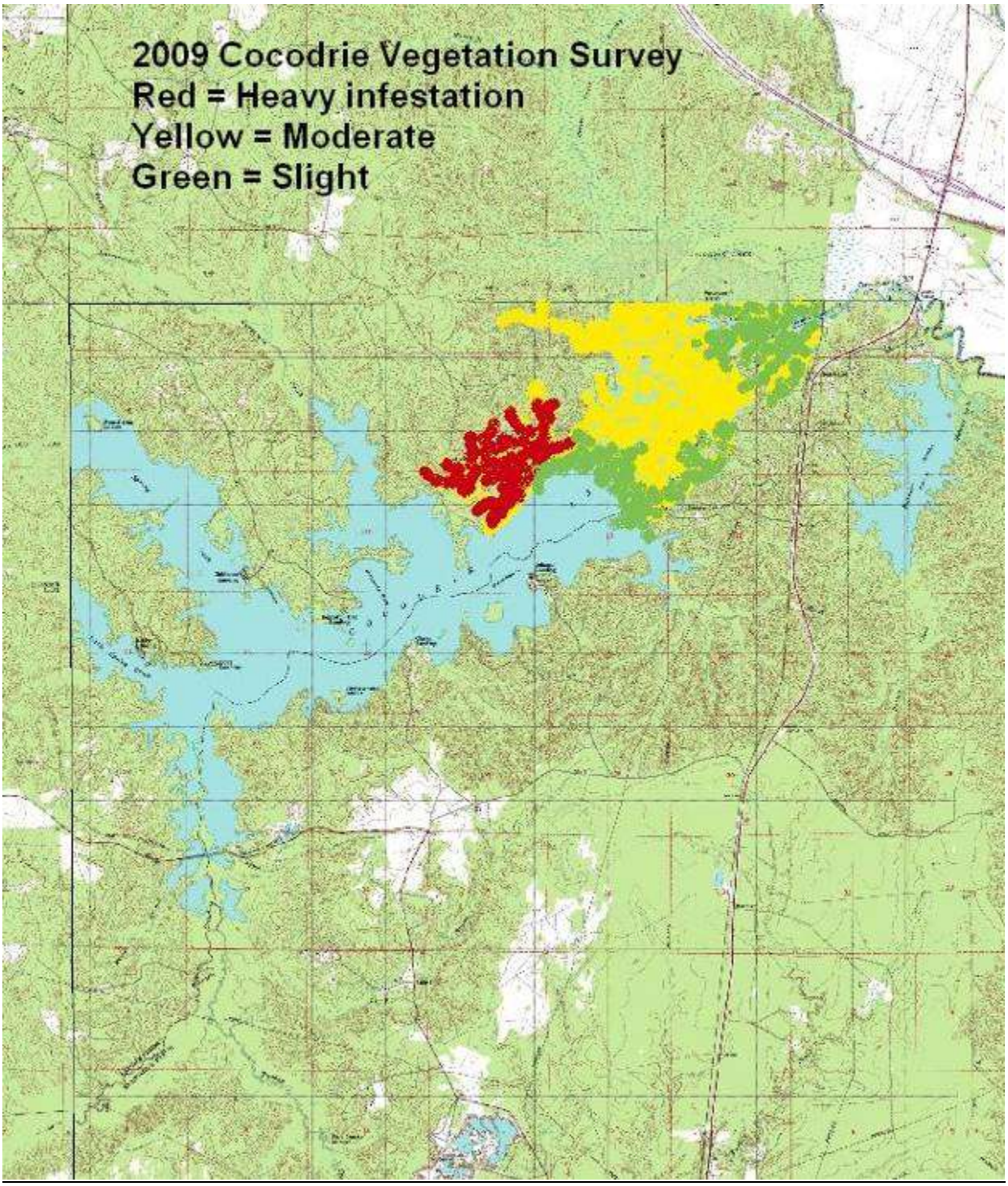
Cocodrie Lake has less coverage of common salvinia (*Salvinia minima*) this year than the lake displayed in Sep. of 2005. Areas of the lake where common salvinia are not found include the main channel. This is marked in green on the map. Green areas of the map are areas that were treated throughout 06 and 07 with reward. Many of the flooded woodland areas of the lake still contain copious amounts of common salvinia and are marked red on the attached map. The spillway area of the lake displayed slight amounts of vegetation. Other vegetation observed include Common bladderwort (*Utricularia vulgaris*), Cabomba (*Cabomba caroliniana*), Coontail (*Ceratophyllum demersum*), Parrot feather (*Myriophyllum brasiliensis*), Primrose (*Ludwigia* spp.) and White water lily (*Nymphaea odorata*). This vegetation is found in the large shallow coves surrounding the deeper center channel. Coverage by submerged vegetation in these shallow coves is severe and marked in red on the map. Little lake, a deeper cove located on the southwestern edge of the lake has slight to no vegetation.


RED = Severe infestation
Yellow= Moderate infestation
Green = Slight infestation
* red area is flooded woodland with a severe infestation of common salvinia (Salvinia minima)
Vegetation Survey 2007

2009 Aquatic Vegetation Survey
Cocodrie Lake Sep. 16th

Field personnel: J. David & M. Plonsky
Report by: J. David

Cocodrie Lake is going in the last year of its three year drawdown which began in 2008 to control the spread of common salvinia. A survey was conducted on September 16th, 2009 to observe common salvinia. The lake was approximately 4 feet below pool stage. Common Salvinia was observed near the northwest end of the lake, near blue lake, in the channel. Majority of the wooded areas were dry which has reduced the amount of common salvinia. Other areas observed was Bennett's Bay and Little River where no vegetation was discovered. Neal's Bay and Blue Lake had moderate to heavy amounts of common salvinia and light amounts of fanwort and hydrilla. Majority of the common salvinia was in the channel flowing towards the control gate.


2009 Cocodrie Vegetation Survey
Red = Heavy infestation
Yellow = Moderate
Green = Slight

Lake Cocodrie Vegetation Survey 8/16/2011 by M. Plonsky and P. Allemond

Lake Cocodrie was mostly free of any type of aquatic vegetation. There were small amounts of coontail (*Ceratophyllum demersum*) and water paspalum (*Paspalum repens*) observed at the Johnson boat launch (30.966601, -92.435672) along with a couple of white water lily (*Nymphaea odorata*). Small patches of common salvinia (*Lemna minor*) were seen in the end of Neal's bay (30.970467, -92441578) and the entrance into Blue lake (30.978448, -92.434431). Only small amounts of alligator weed (*Alternanthera philoxeroides*) were observed in the lake surrounding a couple of the smaller trees or stumps within the lake such as in Bennett bay (30.964112, -92.456313). Other than this condition, Bennett bay was free of aquatic vegetation. Small amounts of common salvinia and duckweed were seen surrounding the outflow pipe located adjacent to the spillway structure (31.001387, -92.382661).

At this time, the outflow pipe remained open and lake water was flowing through the pipe and into Bayou Cocodrie. No water was flowing over the spillway and the lake water level was about one foot below the top of the spillway. For the most part, especially when in comparison to previous amounts, Lake Cocodrie is free of any considerable amount of aquatic vegetation.

Dissolved oxygen levels were above 3.0 mg/l at the surface throughout the system however these levels were below 2.0 mg/l and often below 1.0 mg/l at any depth greater than 3.0 feet. Water temperatures were above 30 degrees centigrade at surface and pH was found to be above 6.0 at both surface and bottom at all stations recorded. One boat with one person was observed fishing in Bennett bay.

Date	Temp	SpCond	Salinity	Depth	pH	pHmV	Turbidity+	Chlorophyl	d.o. percent	d.o. mg/l	
08/16/11	29.67	0.063	0.03	3.087	6.93	3.9	269.4	46.8	5.00	0.38	bennet
08/16/11	31.87	0.063	0.03	0.609	6.99	0.3	3.4	17.7	59.20	4.33	
08/16/11	18.06	0.178	0.08	8.868	6.56	23.7	39.9	54.5	4.70	0.45	little lake
08/16/11	29.38	0.094	0.04	0.381	6.74	14.6	0.8	15.0	44.90	3.43	
08/16/11	21.06	0.166	0.08	10.899	6.60	21.7	27.3	56.0	3.80	0.34	fontenot
08/16/11	30.58	0.060	0.03	0.169	6.60	22.7	1.0	15.3	39.20	2.94	


Peterson Island
entrance to Blue Lake
slight common salvinia
Island Gap Island
Neal's Bay slight
common salvinia
Peachtree Island
167
Cocodrie Lake
Jayhawkers Island

Aquatic Vegetation Survey of Cocodrie Lake 06/27/2012 by

M. Plonsky, LDWF Inland Fisheries biologist

P. Allemond, LDWF Fisheries Tech.

A survey of aquatic vegetation present in Cocodrie Lake, Evangeline parish, Louisiana was completed on June 27, 2012. The lake appeared to be greater than 75% free of aquatic vegetation. Thin amounts of common salvinia were observed throughout the flooded wooded areas of the system with a large thick accumulation of common salvinia discovered in the lake trail at about halfway between the boat launch located at lake spillway and the Johnson boat launch or at about Lat. 30.985204, Lon. -92.411281. It appeared as though much of the salvinia from within Cocodrie Lake had become trapped within this location on its way out of the lake via the overflow of the spillway and at the time, ¾ open outflow pipe. The outflow pipe had been open for approximately one half week. This is done as requested by CLECO power which operates a power plant downstream from Cocodrie Lake and was in need of supplemental water due to area drought conditions. Lake level at the time of the survey was pool with very little water passing over the spillway but not having yet ceased completely.

A survey of Bennet's bay revealed little to no aquatic vegetation with only small patches of white lotus observed. A bottom drag for collection of submerged aquatic vegetation rendered no result. Only decaying leaf material was obtained.

Very little hydrilla was observed anywhere in the lake with only small sprigs found mixed in with light patches of fanwort seen in spotty bank accumulations in Blue lake.

Very little duckweed was observed in the lake with most accumulations in the large salvinia flat located in the lake public boat launch trail mentioned previously.

Water qualities were captured using a YSI sonde. The pH was found to be decreasing as the day progressed with early pH above 7.5 around 10 am decreasing to below 7.00 by 1 pm. Bottom temperatures were 5 degrees warmer near the bottom 200 yards from the spillway than the bottom of the main channel in the Fontenot bay area. The Fontenot bay sample was taken several hours before the spillway. Recorded water qualities are below. First sample is from the mid-lake area called Fontenot bay lat 30.964495, long -92.443496 and the second is from Bennet's bay Lat. 30.964586, Lon. -92457680. Blue hole is located at 30.981123, long -92.440673. Spillway is Lat. 30.999938, Lon. -92.384118.

NO Giant Salvinia observed.

Date	Temp	SpCond	Salinity	Depth	pH	Turbidity+	Chlorophyl	D.O. mg/l	
06/27/12	20.64	0.100	0.05	11.759	8.82	6.1	65.6	1.48	fotenot ba
06/27/12	27.40	0.055	0.02	0.236	7.74	0.2	13.9	2.78	f bay
06/27/12	27.33	0.055	0.02	0.654	7.58	0.2	14.5	2.88	f bay
06/27/12	28.42	0.051	0.02	3.411	7.15	8.5	21.3	3.10	bennet
06/27/12	29.43	0.051	0.02	0.371	7.02	5.2	20.9	4.26	bennet
06/27/12	24.79	0.056	0.03	5.402	6.99	15.1	14.2	1.40	blue hole
06/27/12	26.85	0.054	0.02	0.666	6.80	0.6	13.3	2.24	blue hole
06/27/12	25.67	0.055	0.02	11.895	6.76	14.8	8.1	0.93	spillway
06/27/12	28.46	0.050	0.02	0.370	6.63	0.1	11.1	2.36	spillway