LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

2021 AQUATIC VEGETATION CONTROL PLAN

IATT LAKE

Located in Grant Parish
Map located in Appendix I

1. Waterbody type – Impounded swamp

2. Age and condition of control structure – Original dam was finished in 1956. The spillway crest was raised from 80 feet MSL to 83 feet MSL in 1966

3. Type of control structure:
   The drawdown structure is incorporated into the spillway; two gates - 7'x 5' each
   Dam height is 36 feet.
   Structural height is 36 feet.
   Hydraulic height is 30 feet.
   Maximum discharge is 12,128 cubic feet per second.

4. Maximum storage is 167,000 acre-feet.
   Normal storage is 31,000 acre-feet.

5. Surface area at pool elevation – 7,100 acres

6. Drainage area is 242 square miles

7. Watershed ratio – 22: 1

8. Average depth – 6' average depth; 19' maximum depth

9. Drawdown potential of structure – The two control gates have the capability to dewater the impoundment up to 9 feet below spillway crest height. The extent to which the impoundment can actually be dewatered may be less. Due to organic accretion, the bathymetry of Iatt Lake is undetermined at this time. Disruptions in drainage flow are likely.

10. Lake Authority
    a. Act No. 27 of 1940 Regular Session and Act 244 of the 1962 Regular Session established the Iatt Lake State Game and Fish Preserve.
    b. Act 858 of 1981 transferred the Iatt Lake State Game and Fish Preserve to the Louisiana Department of Wildlife and Fisheries (LDWF).
    c. Act 728 of 1982 provides for LDWF to assume direct responsibility for certain aspects of the management of Iatt Lake if the governing authority of the parish abolishes the locally appointed "lake commission".
    d. The Grant Parish Police Jury (GPPJ) passed a resolution on June 1987 requesting that the Louisiana Department of Wildlife and Fisheries assume the management of Iatt Lake.
    e. On July 17, 1987, the Grant Parish Police Jury abolished the Iatt Water Conservation board and requested the LDWF to take over management of Iatt Lake.
    f. LDWF currently works in conjunction with the Grant Parish Police Jury to manage Iatt Lake.

    Grant Parish Police Jury, 200 Main Street, Colfax, La. 71417
    Office phone: (318)-627-3157

11. Procedure to conduct drawdowns

The Louisiana Department of Transportation and Development (DOTD) is responsible for the maintenance and operation of the Iatt Lake control structure as per Act 270 of 1984. DOTD is authorized to operate the structure as necessary for the purposes of maintenance and operation.

Operation of the Iatt Lake control structure for lake management purposes is initiated by written request from the LDWF Secretary to the DOTD Secretary. The request must describe details including gate opening date, rate of drawdown, and gate closure date.

LDWF drawdown recommendations are submitted to Grant Parish Police Jury for concurrence. Drawdown recommendations are announced and open for public comment at least 30 days prior to implementation.

Drawdown History

DATE	PURPOSE	DEPTH BELOW POOL	GATES OPENED	GATES CLOSED	NOTES
Fall 1961	Dam Maintenance	To main channel	Fall	Fall 1962	Added a 3' cap to the spillway
Fall 1966	Dam Maintenance	5'	Fall		Dam maintenance
1968	Aquatic Vegetation Control	7'	Oct 15	Jan 15,1969	
1972	Aquatic Vegetation Control		Oct 20	Jan 20,1973	
1976	Aquatic Vegetation Control		Fall	Feb 1,1977	
1980	Aquatic Vegetation Control	Scheduled for March, but cancelled due to public opposition			
1981	Aquatic Vegetation Control	8'	Aug 15	Jan 15,1982	
1987	Aquatic Vegetation Control	8'	Aug 7	Jan 1988	
1990	Aquatic Vegetation Control/ Boat Ramp Construction	8'	Sept 17	Unsuccessful due to rainfall	
July '93	Aquatic Vegetation Control	8'	July 12	Jan 1994	
June '97	Aquatic Vegetation Control	8'	June 16	Nov 1, 1997	
Aug '00	Aquatic Vegetation Control	5'	Aug	Jan 2001	
Aug '02	Aquatic Vegetation Control	8'	Aug 20	Unsuccessful due to heavy rainfall	
2003	Aquatic Vegetation Control	5'	Fall	Cancelled due to Senate Resolution NO. 12 by Senator Smith	
June '04	Aquatic Vegetation Control/ Prep for Triploid Grass Carp (TGC) Stocking	8'	June 14	Oct 25, 2004	Closed to Fishing
May '08	Aquatic Vegetation Control/ Prep for TGC Stocking	8'	May 12	Oct 2008	Closed to Fishing

July 2015	Aquatic Vegetation Control/ Prep for TGC Stocking	8’	July 27	Oct 21, 2015	Drawdown began late due to flooding in the Red River
May 2016	Aquatic Vegetation Control	8’	May 23	Oct 3, 2016	Drawdown began a week late due to flooding in the Red River. Drought conditions caused lake to go down to ~10ft below pool.
May 2017	Aquatic Vegetation Control/ Control Structure Repair	9’	May 15	Dec.15,2017	
May 2018	Aquatic Vegetation Control/ Control Structure Repair	11’	May 31	July 9, 2018	Gate repair on dam. Lake didn’t return to pool until November
July 2020	Aquatic Vegetation Control	6’	July 1	September 30	

What significant stakeholders use the lake?
Recreational use of Iatt Lake is primarily by anglers and waterfowl hunters. The Iatt Lake shoreline is developed with numerous residential and recreational properties.

What are their needs and concerns?
Primary needs are:
1. Maintenance of recreational hunting and fishing opportunities
2. Preservation of aesthetic qualities

What is the history of aquatic vegetation complaints?
Overabundant vegetation has been associated with Iatt Lake since impoundment. Submersed vegetation thrives in the abundant shallow waters. Large areas of bald cypress (*Taxodium distichum*) – water tupelo (*Nyssa aquatica*) forest are present in Iatt Lake. The thick standing timber eliminates wind flow and wave action necessary to physically remove floating vegetation. The introduction of invasive species including water hyacinth (*Pontederia crassipes*), hydrilla (*Hydrilla verticillata*), and giant salvinia (*Salvinia molesta*) has greatly contributed to the problem of overabundant aquatic vegetation. Giant salvinia has become the major aquatic vegetation problem of the lake due to the large expanses of cypress and tupelo trees.

Have there been any controversial issues on the lake?
Lake drawdowns are a controversial issue. Low water levels interfere with boating access by sportsmen.

Aquatic Vegetation Status:

The unsatisfactory conditions that exist in Iatt Lake are the product of circumstances that have combined to create an ideal habitat for excessive vegetation growth. Iatt Lake is an impounded swamp with inherent physical characteristics that constitute the actual problem; it is shallow, heavily forested, and has little water level fluctuation. Unfortunately, the introduction of invasive plant species has made symptoms of the problem much more acute. Giant salvinia has become an established component of the Iatt Lake ecosystem and will remain so into the future. LDWF will continue to utilize all available means to control vegetation, and will remain open to consideration of newly proposed controls.

In February 2017, high densities of giant salvinia weevils (*Cyrtobagous salviniae*) were observed. Monthly surveys were conducted and showed a high population of weevils throughout the lake. Giant salvinia exhibited slower growth, and did not achieve tertiary stages in large portions of the lake. A drawdown was initiated on May 15. During that period, much of the lake was not accessible by boat due to low water, and extensive weed surveys could not be conducted. An assessment was made by vehicle and foot, and it was determined that there was approximately 400 acres of giant salvinia coverage on the lake. No emergent vegetation was observed, although alligator weed (*Alternanthera philoxeroides*) was prevalent on dry ground areas. No submersed vegetation was observed.

A vegetation survey was not conducted during the summer of 2018 because of limited access during the drawdown. Due to a period of hard freezing temperatures during the 2017-2018 winter, giant salvinia was reduced, but persisted in scattered areas in the heavily wooded portions of the lake. This harsh winter also reduced the weevil population on the lake. A site visit was conducted on January 10, 2019 during high water and a large amount of giant salvinia was present. There were approximately 800 acres of giant salvinia.

A vegetation survey was conducted on July 29, 2019. Floating vegetation consisted of approximately 1,100 acres of giant salvinia. The major mats of giant salvinia were located out in front of the dam, in the arms of Spider Lake, and in the heavily wooded area north of the Rice Patch. Emergent vegetation present was approximately 300 acres of alligator weed, and 20 acres of white water lily (*Nymphaea odorata*). In front of the dam, there was approximately 40 acres covered with a mixture of smartweed (*Polygonum spp*.), hibiscus (*Hibiscus spp*.), and scattered bald cypress tree saplings. Submersed vegetation consisted of scattered areas of bladderwort (*Utricularia spp*.) and fanwort (*Cabomba caroliniana*). There was approximately 10 acres total submersed vegetation.
A vegetation survey was conducted on July 8, 2020. Floating vegetation consisted of approximately 3,000 acres of giant salvinia. The major areas were in front of the dam, the Spider Lake area, wooded area north of the Rice Patch, and large mats north of the International Paper boat landing. Other vegetation was similar to 2019. Emergent vegetation present was approximately 300 acres of alligator weed, and 20 acres of white water lily (*Nymphaea odorata*). In front of the dam there was approximately 40 acres covered with a mixture of smartweed (*Polygonum spp*.), hibiscus (*Hibiscus spp*.), and scattered bald cypress tree saplings. Submersed vegetation consisted of scattered areas of bladderwort (*Utricularia spp*.) and fanwort (*Cabomba caroliniana*). There was approximately 10 acres total of submersed vegetation.

Limitations:

1. Extensive shallow water and the dense cypress-tupelo forests limit access for foliar herbicide applications.

2. The large watershed to impoundment ratio (22:1) and contributions of groundwater from numerous springs shorten the retention time for water in Iatt Lake. As a result, water-soluble herbicides that require extended exposure time are not applicable for Iatt Lake.

Past Control Measures:

Biological:

Past control measures have included numerous drawdowns and biological controls. Triploid grass carp (*Ctenopharyngodon idella*) have been stocked for hydrilla control. Giant salvinia weevils were stocked into Iatt Lake in July and August of 2015 as a biological control for giant salvinia. The estimated number stocked was 100,000 adult giant salvinia weevils. No weevils were stocked in 2016. On February 7, 2017 during a site visit, salvinia weevils were found in several different locations throughout the lake. More intense monitoring of the population was conducted, and a substantial population of weevils was observed throughout the lake in 2017. After the winter of 2017-2018, there was a significant decrease in the weevil population throughout the lake. This is thought to be due to several days of freezing temperatures during this time. In 2018, 93,300 weevils were stocked in May and June throughout the lake. In 2019, 88,525 weevils were stocked at eleven release sites throughout the lake. During the September 2019 population sampling, weevils were detected at 14 of the 20 stations throughout the lake.

IATT LAKE TRIPLOID GRASS CARP INTRODUCTIONS		
DATE	SIZE	NUMBER STOCKED
4/6/2005	PHASE II FINGERLINGS (8-10")	7,495
4/6/2005		40 *
3/1/2007	1 YEAR OLD	24 *
2/2009	PHASE II FINGERLINGS	21,300
Nov-Dec 2015	Minimum size – 12 inches	49,700
* Denotes fish that were tagged as part of a TGC movement study.		

Weevil stocking history and sampling results are depicted in tables below:

Year	Weevils Stocked
2015	91,146
2016	71,388
2018	93,300
2019	116,320
2020	92,213

2020 Iatt lake Sampling Results (20 sample sites)

Date sampled	Adult weevils	Larval weevils
24 Sept. 2019	7/kg (14 sites)	15/kg (14/20 sites)
21 May 2020	4/kg (15 sites)	4/kg (15/20 sites)
14 Oct. 2020	96/kg (20 sites)*	16/kg (18/19 sites)

* Site 3 sample contained 373 adults. If site 3 data was removed, adult average decreases to 53/kg.

Chemical:

Herbicides are applied to emergent vegetation annually. Herbicides have been applied to nuisance aquatic vegetation in Iatt Lake at the following rates:

2, 4-D (Platoon): Used at a rate of 0.50 gallons per acre to treat water hyacinth and American lotus (*Nelumbo lutea*).
Glyphosate (Aquamaster, Aquastar, etc.): Used at a rate of 0.50 gallons per acre is used to treat American lotus during the active growing period.

Glyphosate (0.75 gal/acre) + Diquat (0.25 gal/acre) + Aqua King Plus (0.25 gal/acre) + Air Cover (12 ounces/acre): Used to control giant and common salvinia from April 1 to October 31.
*Aqua King Plus and Air Cover surfactants have been replaced by Turbulence (0.25 gal/acre) since 2017

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

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

The herbicide application history for Iatt Lake is provided in Appendix IV.

2021 Recommendations

LDWF recommends the use of an integrated management program of water level fluctuation, herbicide applications and biological control measures to control aquatic vegetation in Iatt Lake. The combined use of all applicable control measures has proven to be the most efficient and effective approach.

Physical:

A lake drawdown will be requested in 2021. Maintaining manageable levels of giant salvinia will likely not be possible without conducting a drawdown. Weevil population density and effects on the salvinia will be monitored. This drawdown should begin on July 1, 2021 and the gate should be closed on September 30, 2021. The lake will be lowered to approximately six feet below normal pool stage at a rate of 3-4 inches per 24 hours.

Chemical:

The use of EPA-approved herbicides is recognized as an appropriate and necessary component of the LDWF integrated vegetation management program for Iatt Lake. Boating access points will receive increased priority. Foliar herbicide applications to giant salvinia and other noxious aquatic vegetation will be conducted routinely in accordance with LDWF Aquatic Herbicide Application Procedures:

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

Biological:

Giant salvinia weevils will continue to be stocked as needed and available, and the population monitored to determine the effects on giant salvinia coverage.

Appendix I

Map of Iatt Lake

Appendix II

Iatt Lake Control Structure and Spillway

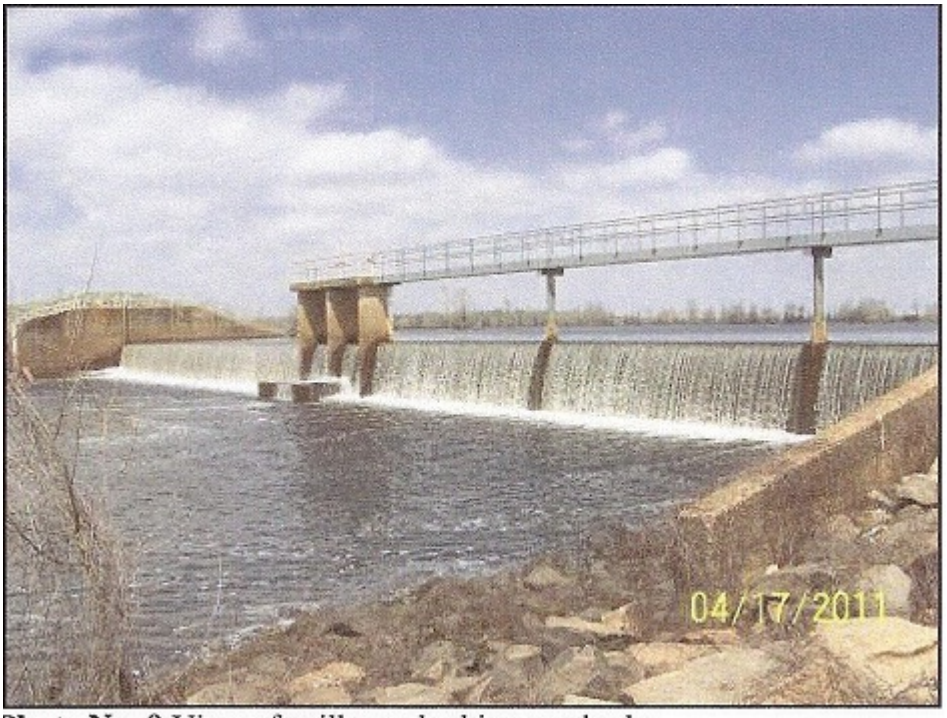
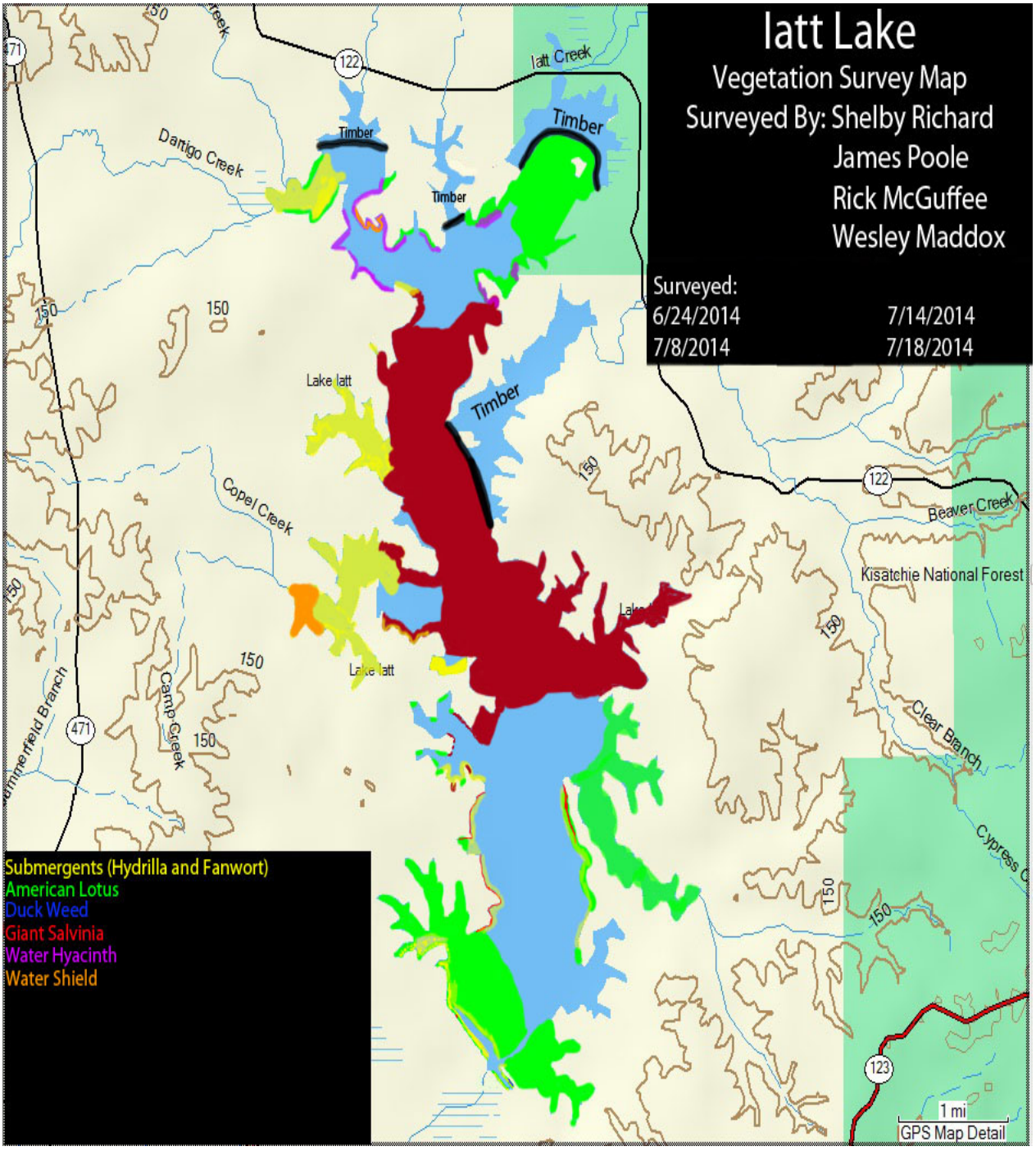
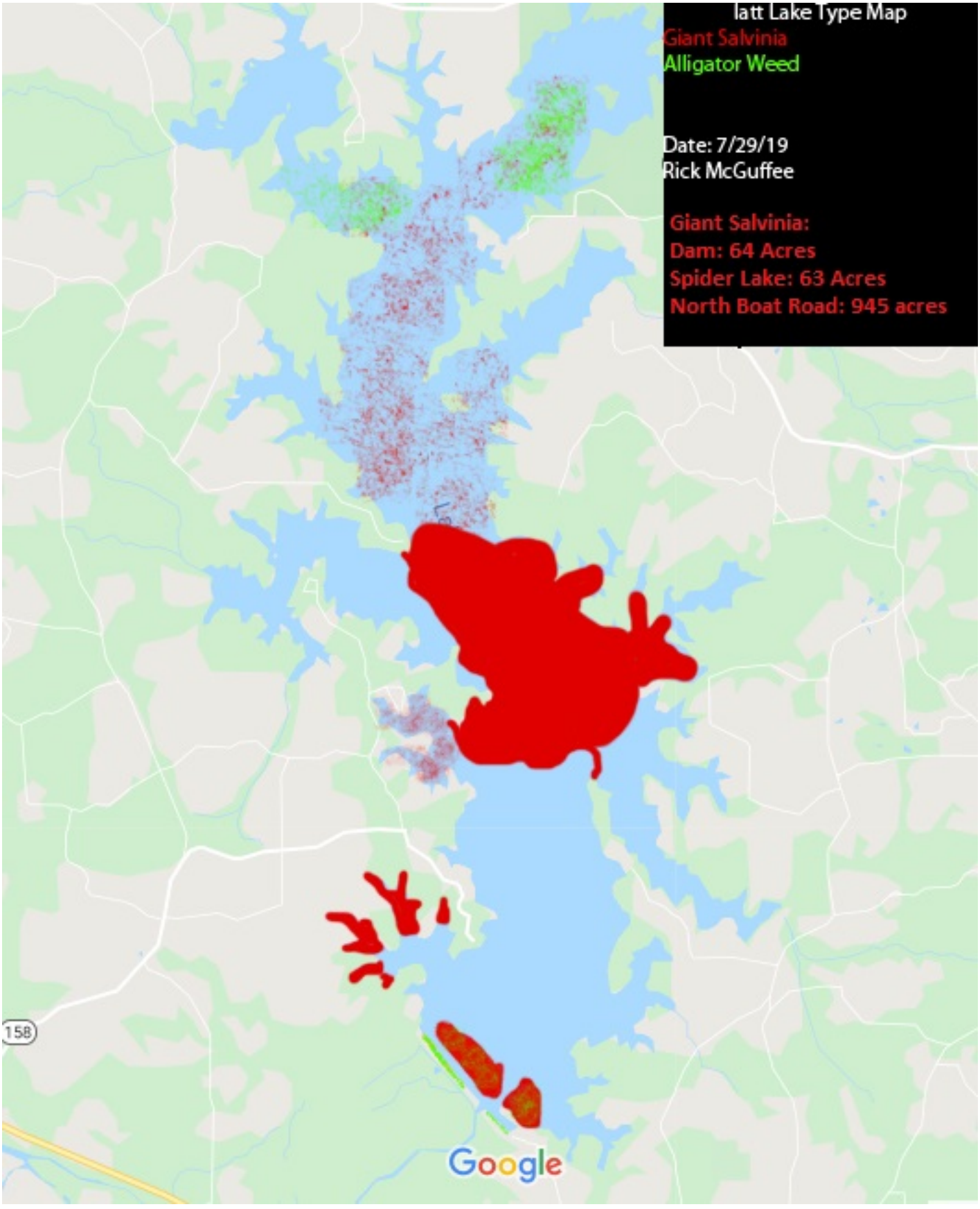


Photo No. 9 View of spillway, looking northerly

Appendix III

Vegetation Typemap of Iatt Lake 2014




Iatt Lake Type Map
Giant Salvinia
Alligator Weed
Date: 7/29/19
Rick McGuffee
Giant Salvinia:
Dam: 64 Acres
Spider Lake: 63 Acres
North Boat Road: 945 acres
158
Google

Appendix IV

Year	Acres	Vegetation
2005	5	Water hyacinth
	65	White water lily
2006	205	American lotus
	2	Parrot feather (*Myriophyllum aquaticum*)
	118	Water hyacinth
	14	White water lily
2007	14	Common salvinia
	222	American lotus
	45	Water hyacinth
	1	Alligator weed
	71	White water lily
	3	Water shield
2008	10	American lotus
	69	Common salvinia
	1	Giant salvinia
	18	Water hyacinth
	10	White water lily
2009	633	American lotus
	223	Common salvinia
	1	Water hyacinth
2010	6	Water hyacinth
	10	Common salvinia
	110	American lotus
2011	1	Alligator weed
	45	American lotus
	3	Common salvinia
	11	Water hyacinth
	7	White water lily
	1	Fanwort
2012	22	Alligator weed
	253	American lotus
	405	Common salvinia
	174	Water hyacinth
	84	Water shield/White water lily
	6	Giant salvinia
2013	80	American lotus
	12	Fanwort
	413	Common salvinia
	411	Giant salvinia
	62	Water hyacinth
	10	White water lily
2014	30	American lotus
	5	Alligator weed
	38	Common salvinia
	1017	Giant salvinia
	17	Water hyacinth
2015	1195	Giant salvinia

2016	577	Giant salvinia
2017	440	Giant salvinia
2018	54	Giant salvinia
2019	19.5	Alligator weed
	1588.5	Giant salvinia
2020	646.5	Giant salvinia

Appendix V

DEPARTMENT OF THE ARMY
VICKSBURG DISTRICT, CORPS OF ENGINEERS
4155 CLAY STREET
VICKSBURG, MISSISSIPPI 39183-3435

REPLY TO
ATTENTION OF:

October 21, 2016

Operations Division

SUBJECT: Determination of Permit Requirements for Regulated Activities Associated with the Logging of Iatt Lake, Located in Section 15, T7N-R3W, Grant Parish, Louisiana

Mr. Dean Tyler
Ross Shipping, L.L.C.
3786 Old Marksville Highway
Pineville, Louisiana 71360

Dear Mr. Tyler:

This is in response to the request for review of possible regulatory requirements for the proposed Logging Project within Iatt Lake, located in Section 15, T7N-R3W, Grant Parish, Louisiana.

Based upon the information furnished (enclosure), it appears that Department of the Army permit requirements, pursuant to Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act, will not be required for the proposed work, since no regulated activities will occur in any potentially jurisdictional wetlands and/or other waters of the United States. In the event that project plans are changed, or if you anticipate any additional construction, please contact this office for a reevaluation of permit requirements and refer to identification no. MVK-2016-879 when submitting the information.

Based upon the information provided in your application, the proposed land clearing within jurisdictional wetlands and waters of the U.S. will not result in a discharge of dredged or fill material. Please be advised if you undertake activities and they result in an unauthorized discharge, you will be subject to review for an enforcement action.

This determination of Department of the Army regulatory requirements does not convey any property rights, either in real estate or material or any exclusive privileges, and does not authorize any injury to property or invasion of rights or local laws or regulations, or obviate the requirement to obtain State or local assent required by law for the activity discussed herein. If we may be of any further assistance in this matter, please contact Mr. Spencer Dixon, telephone (601) 631-7690 or email address: Spencer.Dixon@usace.army.mil.

I am forwarding a copy of this letter to Mr. Ricky Moses, Louisiana Department of Wildlife and Fisheries, Post Office Box 98000, Baton Rouge, Louisiana 70898 and Mr. Rick McGuffee, Louisiana Department of Wildlife and Fisheries, 1995 Shreveport Highway, Pineville, Louisiana 71360.

Sincerely,

Cori Carraway

Cori Carraway
Chief, Permit Section
Regulatory Branch

Enclosure