

# **LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES**



**OFFICE OF FISHERIES  
INLAND FISHERIES SECTION**

**AQUATIC VEGETATION MANAGEMENT PLAN**

**LAKE ST. JOSEPH**  
(Updated March, 2013)

## **GENERAL INFORMATION**

Parish

Tensas

Waterbody Type

Natural oxbow lake

Size (surface acres)

1,000 acres

Watershed

The ratio of watershed to lake surface is 14:1.

Watershed characteristics: Comprised primarily of agriculture

Soil characteristics: Clayey Loam

Drawdown Capabilities

None

## **LAKE AUTHORITY**

The controlling authority is the Lake St. Joseph Recreation and Water Conservation District created by Act 328 of 2003. See Attachment 1.

Contact information for the Lake St. Joseph Recreation and Water Conservation District is as follows:

Randy McDonald

318-467-5154 (Office)

318-282-4542 (Cell)

## SHORELINE DEVELOPMENT AND ACCESS

Approximately 20% of the lake's shoreline is comprised of camps many of which have bulkheads and fishing piers.

A public boat ramp is available on the lake. It is located on Hwy 608 approximately 2.5 miles SE of the intersection of Hwy 605 and Hwy 608. The coordinates for the ramp are 32° 01' 15.38'' N, 91° 11' 10.55'' W. The ramp is privately owned and subject to a \$2.00 launch fee.

## PHYSICAL DESCRIPTION OF LAKE

### Shoreline length

Approximately 18 miles of shoreline, avg. width of lake is 1500 ft.

### Timber type

Hardwoods along 74% of immediate shoreline

### Average depth

2.5 feet

### Maximum depth

3.5 feet

### Natural seasonal water fluctuation

1 – 2 foot

## LIMITATIONS

Lake St. Joseph is located near row crop agricultural fields. The lake is used as a water source for the irrigation of crops, thus reducing the number and type of aquatic herbicide treatments available. Currently there is a restriction on the use of 2, 4-Dichlorophenoxyacetic acid (2,4-D), a systemic herbicide used to control American lotus and water hyacinth. A 2,4-D application (LDAF) waiver must be granted by the Louisiana Department of Agriculture and Forestry for application of this herbicide from March 15 to September 1. With the abundance of cotton production surrounding the lake, it is likely that a 2,4-D waiver would be denied. The shallow nature of the lake is favorable for the growth of aquatic vegetation. Accretion in the aging oxbow lake continues due to agricultural

siltation from adjacent fields. Because the lake is shallow with an average depth of 2.5 feet, sunlight can penetrate through to the entire lake bottom, allowing rooted aquatic vegetation throughout the entire waterbody. In addition to excessive siltation, there is no water control structure to draw down the water level. A common practice used to increase the effectiveness of herbicide applications for American Lotus is to draw the water level down. This is a very effective control strategy when done in successive years. Unfortunately this is not an option on Lake St. Joseph.

## **AQUATIC VEGETATION PROBLEMS (Historic)**

### American lotus

Acreage varies with the season (dies back each winter and returns each spring)

Peaked at 380 acres in 2009

Estimated at 580 acres in 2010

Problem areas are usually both ends of the oxbow lake referred to as “the flats”

### Water hyacinth

Until 2008, peak estimates ranged from 100-250 acres

Estimated at 300 acres in 2009

Approximately 300 acres in 2010

### Alligator weed

Mixed with water primrose in a shoreline fringe of approximately 40 acres

### Common salvinia

New infestation

Small patches mixed in with other vegetation

## **NATIVE VEGETATION (Historic)**

### Coontail

Small patches found mainly on southern end of the lake.

Only submerged aquatic vegetation present in the lake.

Evaluation scheduled for potential transplant.

### Primrose

Limited to immediate shoreline fringe

## **CURRENT STATUS OF VEGETATION (Updated Feb. 2013)**

### American lotus

American lotus coverage has expanded for the past several years, with total coverage nearing 500 acres in spring 2012, prior to an aerial herbicide application.

### Water hyacinth

Water hyacinth coverage has been slightly reduced over the past few years. The coverage is limited to both ends of the lake and the two bayous that join the lake. Current coverage is less than 50 acres.

### Alligator weed

Alligator weed is confined primarily to the shoreline and currently poses no serious threats. Total coverage is less than 25 acres.

### Coontail

Coontail is found in small scattered patches throughout the lake. Submerged vegetation is limited due to turbidity of water.

## **TREATMENT OPTIONS**

### **Foliar Herbicide Treatments**

For foliar treatments to be effective, they should be applied to lotus post emergence before viable seeds are produced. Seed production usually occurs in late spring. Multiple treatments over several years are usually necessary to reduce the availability of seeds for re-growth.

### *2,4-D*

The least expensive foliar herbicide is 2,4-D at a cost of approximately \$9.00 per acre to treat American lotus and water hyacinth. It is not effective in controlling common salvinia. Lake St. Joseph is in a 2,4-D waiver restricted area due to agriculture (RS 3:3201-3389,

<http://www.ldaf.state.la.us/portal/Offices/AgriculturalEnvironmentalSciences/PesticideEnvironmentalPrograms/PesticideProgram/24DHerbicideRegulations/tabid/373/Default.aspx>

Pesticide Rules and Regulation pg 227: The waiver period restricts 2,4-D applications from March through September. Unfortunately, the waiver period coincides with the growing season and most effective time of treatment for most nuisance aquatic plants. 2,4-D has

water use restrictions of 21 days for use as both an irrigation source for turf, forage, and food crops and a potable water source.

#### *Triclopyr*

Triclopyr is a systemic broadleaf herbicide that is used to control post emergent lotus and water hyacinth at a cost of approximately \$44.00 per acre. Triclopyr should not be applied within 200 feet of a potable water intake or to waters that will be used for irrigation.

#### *Imazamox*

Imazamox is a systemic broadleaf herbicide that can control post emergent lotus, water hyacinth, and common salvinia. Water treated with imazamox should not be used for irrigation for a 24 hour period following the herbicide application or until the concentration are below 50 ppb. Imazamox cannot be applied within a distance of ¼ mile from a potable water intake. This is the most expensive of the foliar herbicides approved for lotus and hyacinth control at a cost of approximately \$93.00 per acre.

#### *Glyphosate*

Glyphosate is a systemic herbicide that can be used to treat post emergent lotus, water hyacinth and common salvinia. It costs approximately \$13.00 per acre, and is effective on several other floating and emergent plant species. Glyphosate cannot be applied within 0.5 miles of a potable water intake.

#### *Diquat*

Diquat is a contact herbicide that can control a wide variety of plants including water hyacinth and common salvinia. It costs approximately \$49.00 per acre. Because it is a contact herbicide, it is more effective during the winter than the systemic herbicides. Diquat has water use restrictions of 5 days and 2 days for irrigation of food crops and turf crops respectively, 1 day for livestock consumption, and 2 days for potable water sources.

### **Lake St. Joseph Herbicide Treatments**

The majority of aquatic vegetation control effort on Lake St. Joseph has consisted of LDWF applications with boat mounted equipment (Table 1). In November 2009, LDWF conducted a large-scale helicopter treatment. The aerial application treated 380 acres of American Lotus in the southern flats area with 2,4-D. The Lake St. Joseph Commission conducted a similar aerial application in the fall of 2011. There are several effective granular herbicide options that could be effective in the early spring. Unfortunately, large scale application of those options as well as aerial glyphosate treatment may be cost prohibitive.

**Table 1.** Louisiana Department of Wildlife and Fisheries herbicide application data for American lotus and water hyacinth on Lake St. Joseph from 2005 – 2011.

<b>Year</b>	<b>Vegetation</b>	<b>Herbicide</b>	<b>Acres Sprayed</b>
2005	American Lotus	2,4-D	18.00
2005	Water Hyacinth	2,4-D	188.00
2006	American Lotus	2,4-D	12.75
2006	Water Hyacinth	2,4-D	192.25
2007	American Lotus	2,4-D	91.50
2007	American Lotus	Glyphosate	85.50
2007	Water Hyacinth	2,4-D	98.00
2007	Water Hyacinth	Glyphosate	63.40
2008	American Lotus	Glyphosate	159.20
2008	Water Hyacinth	2,4-D	114.00
2008	Water Hyacinth	Glyphosate	39.00
2009	American Lotus	2,4-D	380.00
2009	Water Hyacinth	2,4-D	129.50
2009	Water Hyacinth	Glyphosate	22.75
2010	American Lotus	Glyphosate	173.20
2010	Water Hyacinth	Glyphosate	21.00
2010	Water Hyacinth	Diquat	16.00
2011	American Lotus	Glyphosate	162.00
2011	Water Hyacinth	2,4-D	8.00
2011	Water Hyacinth	Glyphosate	4.00

**Recent Treatment History (Updated Feb. 2013)**

Herbicide applications by boat have been made periodically to reduce coverage of American lotus, water hyacinth, and other nuisance emergent vegetation. Recent efforts have targeted the expanding coverage of American lotus and nuisance water hyacinth

infestations. Table 2 shows the acres sprayed for the most common nuisance species on Lake St. Joseph in 2012. Each of these species was treated with either glyphosate (0.75 gal/acre) or 2,4-D (0.5 gal/acre) with the exception of one application of diquat dibromide (1.0 gal/acre) for control of lotus and water hyacinth.

The difficulty of herbicide application by boat for the control of lotus, because of low summer water levels in 2011, led to the decision to make an aerial application in 2012. During the week of May 20<sup>th</sup>, 2012, an aerial application of glyphosate (0.5 gal/acre) was used to treat an area of approximately 500 acres on the south end of the lake for lotus. Herbicide was provided by LDWF, while the application was provided by the lake commission. The goal was to reduce the expansion of this area by opening the center of the lake, while leaving a fringe along the shoreline and at the extreme end of the lake for fish and wildlife cover and to dampen wave action. Coverage was temporarily reduced to 10% of the original area. Spray crews treated new emergence in July and August. By mid-September, emergence had reached over 50% of the original coverage, though very few of these late emerging plants flowered and produced seed.

Table 2. Acres sprayed with herbicide by LDWF boat crews on Lake St. Joseph in 2012 (does not include aerial application).

<u>Species</u>	<u>Alligator weed</u>	<u>American Lotus</u>	<u>Water Hyacinth</u>	<u>Other</u>
Acres	22	81	90	9

**Aquatic Vegetation Prediction for the upcoming year (2013)**

The lotus seedbed should have been greatly reduced by timely herbicide applications in 2012. 2013 coverage is predicted to be reduced from 2012. Coverage of water hyacinth is predicted to be similar to that of past years, with no serious problems foreseen. Coverage of other species is also predicted to be similar to that of past years.

## **RECOMMENDATIONS FOR AQUATIC VEGETATION CONTROL**

Current recommendations for the Lake St. Joseph aquatic vegetation control plan include foliar herbicide treatments with glyphosate for the next three years. Glyphosate has been selected because of 1) its proven effectiveness on both water hyacinth and American lotus, 2) its lack of restrictions in agriculture zones, and 3) its cost effectiveness. It should also kill any common salvinia that may be present.

LDWF biologists will monitor and determine time of emergence for American lotus in Lake St. Joseph. At emergence, and before seed production in April-May, a strategically placed foliar glyphosate treatment at 0.5 gal/acre will be applied by LDWF personnel using boat mounted equipment. A non-ionic surfactant will be added to the herbicide solution at the rate of 1.0 pt/acre to increase the effectiveness. The treatment area will be a strip, approximately 8,000 yards long and 40 yards wide that will extend the length of the lotus coverage from mid-lake in a southeastern direction to the south flats. This application will provide improved boat access and fishing opportunities, but will also leave enough vegetation in the lake to provide refuge for fish and also to prevent increased water turbidity. An assessment will be made in mid-May to determine the feasibility of the boat-based treatment and the need for aerial application to continue the reduction of American lotus. If the aerial application is performed, the procedures will be similar to those of the 2012. At 4 weeks post treatment, LDWF spray crews will begin follow-up foliar treatments with glyphosate. They will target any living emergent vegetation in the treatment area. After the follow-up treatment, LDWF personnel will conduct monthly inspections and will conduct herbicide applications as needed in the treatment area

# ATTACHMENT 1

## ENROLLED Act 328

Regular Session, 2003 HOUSE BILL NO. 712  
BY REPRESENTATIVES HAMMETT, KENNEY, AND THOMPSON

### AN ACT

To enact Part XXVI of Chapter 13 of Title 38 of the Louisiana Revised Statutes of 1950, to be comprised of R.S. 38:3087.191 through 3087.207, relative to Lake St. Joseph in Tensas Parish; to create the Lake St. Joseph Recreation and Water Conservation District; to create and provide for a board of commissioners of such district; to provide for the powers and duties of the district and the board; to authorize the board to levy taxes and parcel fees, issue bonds, and incur debt; to authorize the board to promulgate rules and regulations to accomplish the purposes of the district and to provide for the enforcement thereof; to provide for violations and penalties; to provide relative to the powers and duties of the Department of Transportation and Development with respect to the district; to provide for the regulation of commercial establishments; to provide for creation and construction of playgrounds and recreational facilities; to provide relative to mineral leases; and to provide for related matters.

Notice of intention to introduce this Act has been published as provided by Article III, Section 13 of the Constitution of Louisiana.

Section 1. Part XXVI of Chapter 13 of Title 38 of the Louisiana Revised Statutes of 1950, comprised of R.S. 38:3087.191 through 3087.207, is hereby enacted to read as follows: PART XXVI. LAKE ST. JOSEPH RECREATION AND WATER CONSERVATION DISTRICT

#### §3087.191. Creation

There is hereby created a recreation and water conservation district to be known as the "Lake St. Joseph Recreation and Water Conservation District".

#### §3087.192. Location

The district shall be comprised of the area of Lake St. Joseph and the Black River Area and all of the land encompassed by Louisiana Highways 605 and 608 surrounding Lake St. Joseph and the Black River Area.

#### §3087.193. District as political subdivision and body corporate; purpose and powers

A. The district shall be a political subdivision of the state of Louisiana which shall have for its purpose the preservation, promotion, and development of the wealth and natural resources of the district by the conservation of the soil and water of Lake St. Joseph for agricultural, recreational, commercial, and sanitary purposes and by the regulation of aquatic plant growth.

B. It shall constitute a body corporate in law with all powers, rights, privileges, and immunities of a corporation. It shall have the power to sue and be sued, to buy and sell, to levy taxes, to negotiate and execute contracts, and to incur debts and issue negotiable bonds in payment thereof under and in accordance with law. It shall have the authority to acquire by purchase, donation, or otherwise every type and specie of property, including servitudes and rights-of-use, necessary to its purpose, and to lease, build, operate, and maintain any works or machinery designed to accomplish the purposes of the district.

C. It shall have complete control over the supply of fresh water from Lake St. Joseph which shall be administered for the benefit of the persons residing or owning property within the district, and if it should be for the benefit of the district, it shall have the authority to sell such water for irrigation, municipal, and industrial uses both within and outside the district. However, the district shall have no authority to regulate or control any use by any municipality, district, or other person of such water supply which use was being made by such municipality, district, or other person on August 15, 2003, including no authority to charge or collect any fee or charge therefor.

D. The district may cooperate and contract with the government of the United States or any department or agency thereof and accept grants and donations of property and money therefrom. It may cooperate with the state of Louisiana or any political subdivision, department, agency, or corporation of the state for the management of the waters of Lake St. Joseph and the construction, operation, and maintenance of facilities designed to accomplish the purpose for which the district is created on any basis including the matching of funds and by participating in projects authorized by any federal or state law as it shall see fit.

§3087.194. Board of commissioners, appointment; tenure; vacancies; compensation; domicile

A. The district shall be governed and controlled by a board of seven commissioners, each of whom shall be a qualified elector of the state of Louisiana, owning property within the district. At least five commissioners shall reside in Tensas Parish, at least four of whom shall reside in the district. Two commissioners may reside outside of Tensas Parish.

B.(1) The initial members of the board of commissioners shall be appointed by the Tensas Parish Police Jury. All members shall be appointed from a list of no more than ten names submitted by the mayor and board of aldermen of the town of Newellton.

(2) The initial members of the board shall serve as follows: three commissioners shall serve a five-year term, two commissioners shall serve a three-year term, and two commissioners shall serve a one year term. Commissioners shall draw lots for their initial terms at the first commission meeting. Thereafter, all commissioners shall serve five-year terms.

(3) After the initial appointments, upon expiration of a term of a member of the board of commissioners, the police jury shall appoint a successor from a list of two names submitted by the board of commissioners. A commissioner may not serve more than two consecutive terms of any length, even if one term is shorter than five years. Any vacancy in the office of commissioner due to death, resignation, or any other cause other than expiration of a term of office shall be filled by the president of the board with majority approval of the board for the remainder of the unexpired term.

C. Members of the board of commissioners shall receive no compensation for their services.

D. The board shall be domiciled at Newellton, Louisiana.

§3087.195. Oaths

Before entering upon his official duties, each member of the board of commissioners shall take the oath of office provided by Article X, Section 30 of the Constitution of Louisiana before an officer authorized by law to administer oaths.

§3087.196. Election of officers

Immediately after the members of the board of commissioners have been appointed, or as soon thereafter as is practicable, they shall meet and organize by electing from their number a president, vice president, and secretary who shall perform the duties normally required of such officers.

§3087.197. Powers of the board

A. In order to accomplish the purposes for which the district is created, the board of commissioners may:

- (1) Purchase, acquire by donation, hold, sell, and convey immovable and movable property and execute such contracts as it may deem necessary or convenient to enable it to properly carry out the purposes for which it is created.
- (2) Acquire servitudes and rights-of-use by purchase, by donation, and by assignment for the district or otherwise.
- (3) Assist in conserving soil and water and in developing the water resources of the district, provided nothing shall be done to interfere with districts or municipalities previously organized under Louisiana law.
- (4) Cooperate with the state Department of Transportation and Development and other state agencies in the maintenance or improvement and the construction of any works or improvements for the control, retention, diversion, or utilization of water or to retard runoff of water and soil erosion; in the construction of any ditch, channel improvement, dike, dam, or levee; and in the repair, improvement, and maintenance of any of said improvements or structures.
- (5) Manage and control the water level and growth of aquatic plants in the lakes.
- (6) Employ and hire secretarial, clerical, and other such personnel as may be necessary in the operation of the business of the district and fix their compensation; employ engineers, attorneys, and other professional personnel as necessary and fix their compensation.
- (7) Levy taxes, issue bonds, and incur indebtedness within the limitations prescribed by the constitution and laws of Louisiana and in the manner prescribed thereby.
- (8) Cooperate and contract with persons, firms, associations, partnerships, private corporations, cities of this state, or other public corporations, and with any other local, state, or federal agencies for the sale or use of any waters impounded by the district.
- (9) Grant franchises to telephone, telegraph, cable, and electric power companies and grant franchises for the purposes of laying gas, sewer, electricity, or other utilities to supply the inhabitants or any person or corporation with gas, water, sewerage, and electricity, when such construction is within the district. Nothing contained in this Part shall affect the vested rights of any corporation which, pursuant to R.S.45:781(A), has constructed, prior to August 15, 2003, and maintains and operates telegraph, telephone, and other lines for the transmission of intelligence.
- (10) Appoint, hire, designate, and empower wardens, rangers, patrols, and such other personnel as may be deemed necessary by the commission for the enforcement of such regulations as may be promulgated and adopted by said commission.
- (11) Do and perform any and all things necessary or incidental to the fulfillment of the purposes for which the district is created.

B. The Lake St. Joseph Recreation and Water Conservation District may have, with respect to the improvements and facilities maintenance of the district, the advice of the Department of Transportation and Development, and it may request from time to time the assistance of the department to make such surveys, inspections, and investigations, render such reports, estimates, and recommendations, and furnish such plans and specifications as the board of commissioners of the district may request.

C. The district may incur debt for any one or more of its lawful purposes, issue in its name negotiable bonds or certificates of indebtedness evidencing such debt, and provide for the security and payment thereof as follows:

(1) To issue certificates of indebtedness maturing within one year from date of issuance to evidence money borrowed in anticipation of current revenues for the administration, operation, construction, and maintenance costs and expenses of the district, which certificates shall be payable in principal and interest from any available income, revenues, fees, or taxes pledged to their payment by the district.

(2) To issue bonds substantially in the manner set forth in Article VI of the Constitution of Louisiana, and other authority supplemental thereto, particularly Part III of Chapter 4 of Subtitle II of Title 39 of the Louisiana Revised Statutes of 1950. Such bonds shall be payable from an ad valorem tax on all taxable property in the district sufficient to pay such bonds in principal and interest when approved by vote of a majority in number of the qualified electors voting on the proposition at an election held for that purpose. Such bonds shall be issued in the manner provided by the law pursuant to which they are being issued, and the maximum interest rate for the bonds shall be that prescribed by such law. The bonds shall be issued in such amount or amounts as the board of commissioners shall determine. However, the principal amount of all such bonds outstanding as of the date of the issuance of any new bonds shall never exceed ten percent of the assessed valuation of the taxable property within the district, to be ascertained by the last assessment roll of record in Tensas Parish.

(3) The district shall have additional authority to levy taxes under the provisions of Article VI, Section 32 of the Constitution of Louisiana, for the purpose of improving, operating, and maintaining its facilities, provided any such tax shall first be approved at an election held for said purpose in accordance with the Louisiana Election Code.

(4) The copy of any resolution levying a tax, certified by the secretary of the board of commissioners of said district, shall be transmitted to the tax assessor of Tensas Parish on or before the first of the year in which the tax is to be assessed and collected, and it shall be the duty of the assessor to assess the tax and extend the same upon the tax rolls of the parish. The tax shall be collected by the sheriff and ex officio tax collector of Tensas Parish in the same manner as taxes levied by the parish. Taxes assessed shall constitute the same liens upon the property assessed, shall bear the same penalties, and collection thereof shall be enforced in the same manner and at the same time as parish taxes.

#### §3087.198. Parcel fee

A.(1) The Lake St. Joseph Recreation and Water Conservation District may levy and collect a parcel fee on improved parcels within its boundaries. The parcel fee shall be imposed by resolution or ordinance of the board of commissioners of the district only after the question of the imposition of the parcel fee and the purpose, rate, and duration of such fee has been approved by a majority of the qualified electors of the district voting at an election held therein. The proceeds from the levy of said parcel fee shall be expended for costs of operation of the district, including management and control of water levels and aquatic plant growth within the district and protection and preservation of the works, improvements, and properties owned or controlled by the district, prescribing the manner of their use by public corporations and persons, and preserving order within and adjacent thereto. Any parcel fee imposed pursuant to this Section shall be levied and collected and be due and owing annually. Such fee may be carried on the tax rolls for Tensas Parish and collected at the same time as parish ad valorem taxes.

(2) If any parcel fee is not paid when due, the district shall proceed against the parcel for collection of the amount of the fee unpaid and delinquent, any collection costs incurred by the district plus interest at a rate not exceeding twelve percent on the unpaid amount of the

parcel fee, and in the event legal proceedings are necessary to effect collection, court costs and reasonable attorney fees. However, attorney fees shall be payable by the parcel owner only if demand by the board of commissioners has been made on said owner by certified mail, and such parcel owner has failed to pay the amount due within ten days after such demand.

(3) A judgment obtained for nonpayment of a parcel fee, upon being recorded in the mortgage records of Tensas Parish, shall prime all other liens except those for taxes and prior recorded local or special assessments. If there are one or more property mortgages on such parcel and the mortgage holder or holders have notified the tax collector in the parish of such recorded mortgage in accordance with the requirements of R.S. 47:2180.1, the district, prior to proceeding against such parcel for failure to pay a parcel fee, shall give notice to each mortgagee of the amount of the parcel fee due and owing on such parcel and that such fee must be paid within twenty days after mailing the notice or proceedings will be commenced against the parcel. The notice shall be sent to each such mortgage holder by certified mail, return receipt requested, or by personal or domiciliary service on such mortgage holder.

B.(1) The district may incur debt and issue bonds payable from an irrevocable pledge and dedication of all or a portion of the proceeds of the parcel fee, provided that the question of funding said proceeds into bonds shall have been approved by a majority vote of the qualified electors of the district voting at an election held therein and the State Bond Commission has approved the issuance of the bonds. The question or proposition with respect to the funding of the proceeds of the parcel fee may be submitted at a separate election held for that purpose. The maturities of the bonds shall be so arranged that the total amount of principal, and interest falling due in such year on all bonds theretofore issued payable from such parcel fee, shall not exceed eighty percent of the estimated proceeds to be received from the levy of such parcel fee in the calendar year in which the bonds are issued.

(2) The bonds may be sold at public or private sale and shall be issued pursuant to the provisions of a resolution adopted by the board of commissioners of the district, provided the bonds shall mature over a period not to exceed the period for which the parcel fee, the proceeds of which are to be used to pay principal and interest on the bonds, is authorized. The bonds and the income therefrom shall be exempt from taxation by the state and by any parish, municipality, or political subdivision thereof.

C. The district may incur debt and issue certificates of indebtedness pursuant to the provisions of R.S. 33:2921 through 2925, subject to the approval of the State Bond Commission.

D.(1) A "parcel" as used in this Section shall mean one or more lots, subdivided portions of ground, or individual tracts identified by an individual assessment number on the assessment rolls of Tensas Parish. A partial owner of a parcel shall be responsible for that proportion of the parcel fee equal to the proportion of the value of the entire parcel assigned to the partial owner on the assessment roll.

(2) An "improved parcel" as used in this Section shall mean a parcel on which a permanent building suitable for residential or commercial use is situated.

E. The district may create different classes of real estate and present to the voters a proposition to levy or impose different parcel fees for each class.

#### §3087.199. Rules and regulations

A. In order to accomplish the purposes of the district, the board of commissioners may make and enforce such rules and regulations as it shall deem necessary and advisable:

(1) To manage and control the water level and the growth of aquatic plants in the lakes.

(2) To protect and preserve the works, improvements, and properties owned or controlled by the district, prescribe the manner of their use by public corporations and persons, and preserve order within and adjacent thereto.

(3) To prescribe the manner of building bridges, piers, boathouses, seawalls, roads, and fences, including fences for the control of livestock or other works in, along, or across any channel or extending into the lake.

(4) To prescribe the manner in which natural or artificial drains, ditches, sewers, pipelines, or other works shall be adjusted to or connected with the works of the district or any watercourse therein and the manner in which the watercourses of the district may be used for sewer outlets for disposal of waste.

(5) To prescribe the permissible uses of the water supply provided by the lake and to prevent the pollution or unnecessary waste of such water supply.

(6) To prescribe or regulate the discharge into sewers of the district of any liquid or solid waste deemed detrimental to the works and improvements of the district.

(7) To establish rules and regulations and cause them to be enforced with regard to activities engaged in upon Lake St. Joseph that are not regulated by the Louisiana Wildlife and Fisheries Commission.

B. The board shall make recommendations to the Wildlife and Fisheries Commission for proposed regulations pertaining to hunting, fishing, trapping, water sports, boating, and the operation of any watercraft upon the proposed lake.

§3087.200. Construction which would impede flow of water in lake prohibited; pollution defined and prohibited; penalties fixed for violations

A.(1) No person or public corporation shall erect within the drainage area of the district any dam or reservoir upon any stream or watercourse which will affect the lake until a copy of the plans thereof has been filed with the board of commissioners and approved.

(2) Whoever violates this Subsection shall be fined not less than five hundred dollars nor more than one thousand dollars or imprisoned for not more than sixty days, or both.

B.(1) No person shall knowingly and willfully empty or drain or permit to be drained from any pump, reservoir, well, or oil field, into any stream or drain constituting the watershed of the lake, or from any stream within said district into said lake any oil, salt water, or other noxious, toxic, hazardous, or poisonous gas, liquid, or substance that would render the water unfit for irrigation or human consumption or would destroy aquatic life in the lake.

(2) Each and every day that oil, salt water, or any other substance described in Paragraph (1) of this Subsection is permitted to flow into natural streams or drains that constitute the watershed of the lake shall constitute a separate and distinct offense.

(3) Whoever violates this Subsection shall be fined not less than one hundred dollars nor more than one thousand dollars or imprisoned for not more than three months, or both.

C.(1) No person shall:

(a) Obstruct drainage channels which compose any drain or stream flowing into the lake by bridging them except in accordance with plans, specifications, and instructions prescribed by the board of commissioners of the district.

(b) Construct dams, locks, or gates in drainage channels of the watershed of the lake or into the lake itself without permission of the commission.

(c) Anchor rafts, crafts, fish traps, fish cars, and other obstacles in the channel of any stream, drain, or natural flow of the feeder streams of the watershed of the lake or the lake itself.

(d) Float timber in the watershed of the lake.

(2) Whoever violates this Subsection shall be fined not less than five hundred dollars nor more than one thousand dollars or imprisoned for not more than sixty days, or both.

D.(1) No proprietor, owner, lessee, or possessor of land abutting upon the lake or along any public road paralleling the water line or contiguous to the lake shall in any manner close or place any obstruction in any drain or ditch, whether on private property or on the public road or levee adjacent to the road, that will in any manner interfere with the effective, thorough, and continuous drainage into the lake.

(2) Whoever violates this Subsection shall be fined not less than five hundred dollars nor more than one thousand dollars or imprisoned for not more than sixty days, or both.

#### §3087.201. Supervision by Department of Transportation and Development

All of the powers and duties relative to construction and letting of contracts for construction required to be advertised by R.S. 38:2211 and 2212 conferred upon the district shall be subject to and exercised under the supervisory control of the Department of Transportation and Development of the state of Louisiana, which department shall furnish to the district such engineering services as it shall require and may cooperate with the district in the construction of any work or facility considered necessary by the district and said department to the purposes of the district.

#### §3087.202. Contracts let by board

Any and all contracts of the district shall be let by the board of commissioners under the provisions of R.S. 38:2181 et seq.

#### §3087.203. Mineral rights

Whenever it shall become necessary for the district or the Department of Transportation and Development to acquire full ownership of any land for the purpose of constructing any work or facility within the district, the owner thereof in his own behalf or in behalf of his assigns in the event of a prior assignment may retain the mineral rights to such property together with the right to grant mineral leases and servitudes thereon. No form of prescription shall divest such owner or his assigns of these rights so long as the district or a department or agency of the state retains the ownership of the property, but should ownership pass into private hands, the prescription of nonuse provided by R.S. 31:27 shall apply as in the usual case.

#### §3087.204. Tax exemption; mineral leases unabridged

Should the district or the Department of Transportation and Development acquire a servitude, right-of-use, or title in full ownership to immovable property or any other property, such property shall not be subject to any ad valorem tax or tax of any nature by the state of Louisiana or any political subdivision thereof so long as such property is used for the purpose of the district. The provisions of this Part shall in no way abridge the right of any individual, person, firm, or corporation from whom a servitude or right-of-use may have been acquired to lease the land subject thereto for the production of oil, gas, or other minerals and to produce or cause to be produced oil, gas, or other minerals from such property so long as said leases are subject to the terms and conditions of the servitude executed in favor of the commission.

#### §3087.205. Playgrounds, parks, and other facilities

The board of commissioners may cause to be created and constructed playgrounds, picnic grounds, grounds for recreation, parks, and any and all other facilities to accommodate the public and to provide adequate access to the lake, as may, within the opinion of the board, become necessary. The board of commissioners shall also provide for the construction of public access

boat ramps in the district to allow for and maintain public access to Lake St. Joseph for recreational purposes.

§3087.206. Regulation of commercial establishments

A. The board of commissioners may: (1) Establish and cause to be enforced rules and regulations pertaining to all commercial establishments that may be constructed for the purpose of making commercial use of the lake or its facilities. (2) License and permit such establishments and levy and collect a fee, to be fixed by the commission, for the privilege of making commercial use of the facilities of the lake.

B. The rules and regulations established and promulgated by the board of commissioners pursuant to this Section shall provide penalties for any commercial establishment operating without a permit or license.

§3087.207. Audit

The district shall be audited pursuant to R.S. 24:513.

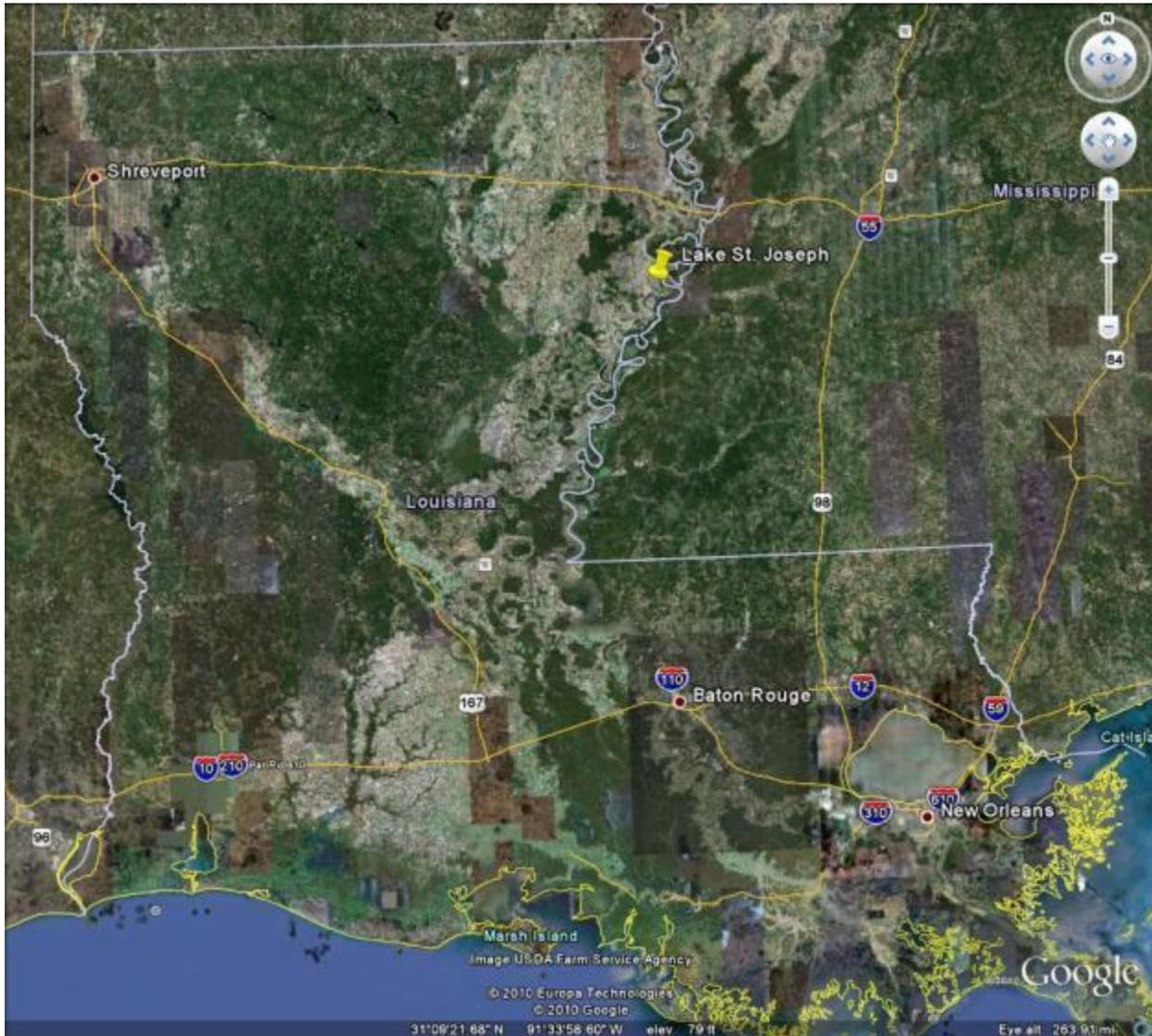
SPEAKER OF THE HOUSE OF REPRESENTATIVES

PRESIDENT OF THE SENATE

GOVERNOR OF THE STATE OF LOUISIANA

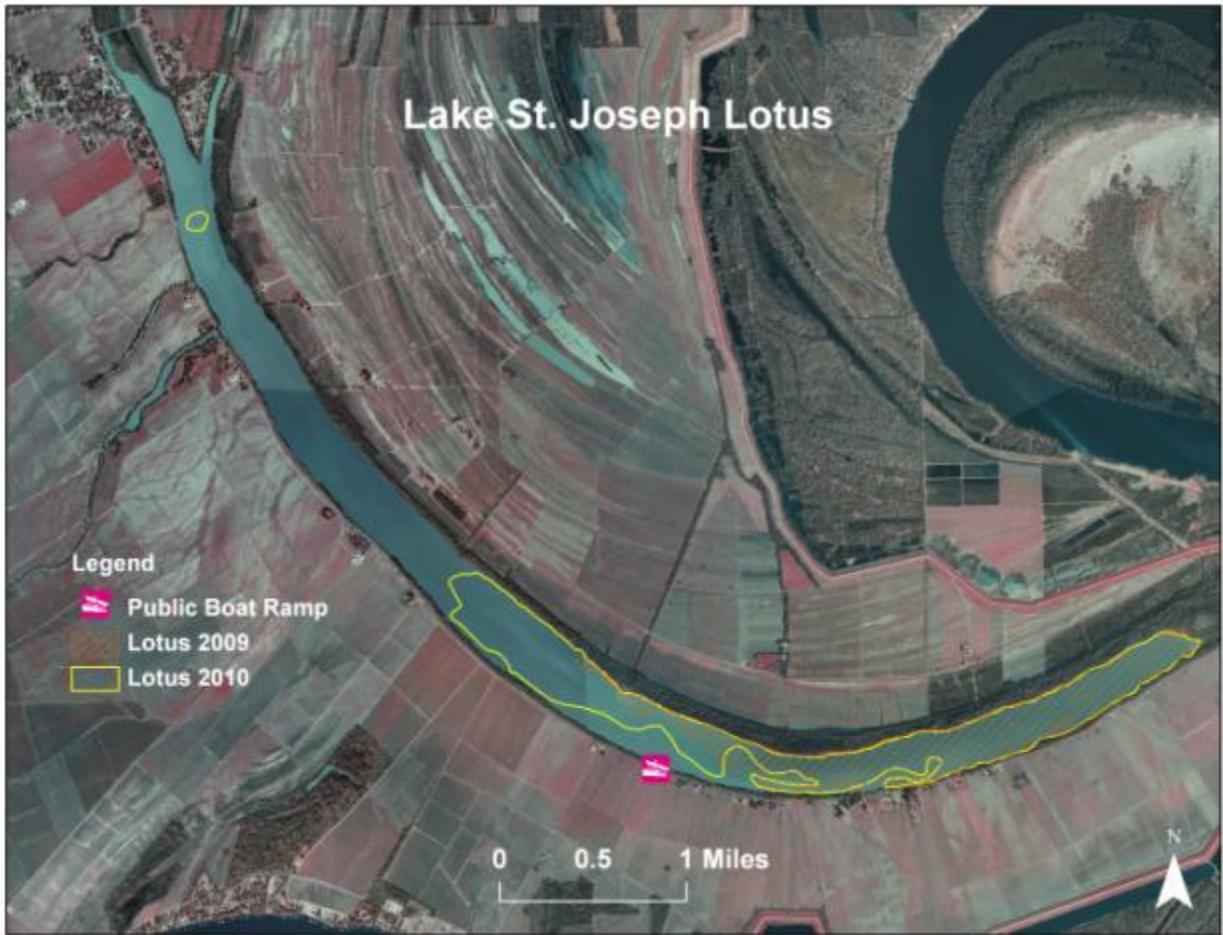
APPROVED:

## ATTACHMENT 2



**Figure 1.** Map of Louisiana indicating the location of Lake St. Joseph, north of Ferriday, LA.

## ATTACHMENT 3



**Figure 2.** Locations of American lotus infestations on Lake St. Joseph in October 2009 and 2010.