

## **2013 Mill Creek Reservoir Aquatic Vegetation Control Plan** LDWF, Inland Fisheries

Date Lake Formed - Impounded in 1971.

Waterbody Type – Upland reservoir, created from the impoundment of Mill Creek

Parish – Bienville Parish near the town of Saline

Age and condition of control structure – approximately 40 years old, good condition.

Type of control structure – spillway constructed from two 8 foot by 9 foot reinforced concrete box culverts that create a weir 50 feet in length set at an elevation of 200 MSL. The structure has one gate which facilitates drawdowns through a 48 inch diameter outflow conduit.

Water level (MSL) – 200 MSL at normal pool stage. Normal seasonal water level fluctuations from approximately 199 MSL to 201 MSL.

Surface area – 560 acres at normal pool stage, normal water level fluctuations do not greatly alter the surface acreage due to shoreline contour.

Average depth – 10.6 feet at normal pool stage

Watershed ratio – 14.4:1

Drawdown Potential of structure – lake can be completely dewatered. Depth and timing of drawdowns may be impacted by the need for the dry hydrants in the lake by the local fire department.

Lake Commission – Mill Creek Recreation and Water Conservation District Commission

Creation / Nomination – The Mill Creek Recreation and Water Conservation District Commission created by state statute (Appendix I). Members are appointed by the Bienville Parish Police Jury (Appendix I).

Mill Creek Recreation and Water Conservation District Commission

Name	Address	Term Expires
Ann Garlington (President)	800 Sand Springs Rd. Saline, LA 71070	12/31/13
Janice Norred (Secretary)	179 Mauthe Rd Castor, LA 71016	12/31/11
Marian Morgan	240 Henry Mauthe Rd. Castor, LA 71016	12/31/11
Rowina Matthews	178 Mill Creek Rd. Saline, LA 71070	12/31/13
Gene Frulla		12/31/11

Rodney Warren – Secretary of the Bienville Parish Police Jury. 318-263-2019

Procedure for spillway openings – DOTD is responsible for operation and maintenance of the control structure, spillway and dam. Drawdown requests from the lake commission require LDWF approval prior to DOTD opening the control structure. When management from the fisheries aspect is required, LDWF will propose the drawdown to the Lake Commission for their input.

Drawdown history of Mill Creek Reservoir from 1980 to 2010.

Date Opened	Date Closed	Depth Below Pool	Purpose	Results	Issues
11/25/1980 (approx.)	1/1/1981 (approx.)	Unknown	Shoreline maintenance	Unknown	None known
Post Labor Day 1986	January 1987	6 Feet	Shoreline maintenance and aquatic vegetation control	Good	None known
9/8/1999	1/14/2000	5 Feet	Shoreline maintenance, erosion control, stump clearing	Unknown	No water for dry hydrant
9/24/2007	1/15/2008	7 Feet	Aquatic vegetation control and shoreline improvements	Good	None known

What significant stakeholders use the lake?

Mill Creek Reservoir is primarily used by lake residents, anglers, and recreational boaters.

What are their needs and concerns?

The primary concern of shoreline residents is access to the lake from their homes and camps and aesthetics. Fishing access is generally a concern only in the upper end of the lake and the backs of coves.

What is the history of aquatic vegetation complaints?

There are occasional aquatic vegetation complaints in the upper end of the lake and the backs of some coves. Drawdowns generally provide several seasons of control for

submerged vegetation.

Have there been any controversial issues on the lake?

There are generally few controversial issues on the lake. One instance which was easily resolved was the scheduling of a drawdown during a water shuttle test by the local fire department. The only dry hydrant in the area would not have been functional during this drawdown, so the drawdown was postponed until the following year.

### **Aquatic Vegetation Status:**

An assessment of the aquatic vegetation on Mill Creek Reservoir was conducted on 8/21/2012. Extremely light coverage of native submersed vegetation was found growing out to approximately the 7 foot contour. The submersed vegetation consisted primarily of bladderwort (less than 5 acres). It was not topped out in any location visited and was found to be growing only 1 to 2 feet or less off of the lake bed. Less than 5% of the lake had a light coverage of this submerged vegetation. Emergent vegetation noted during the survey included watershield and water pennywort. Watershield was the predominant emergent species on the lake. Coverage of watershield was sporadic, and was found growing in water depths of up to 4 feet primarily on the upper end of the lake and on the southern shoreline of the lower end of the lake. Total coverage of watershield was approximately 20 acres and was only problematic along the inhabited shoreline areas.

Mill Creek Reservoir has considerable shoreline contour in many areas on the lower half of the lake which restricts aquatic vegetation to a fringe on the shoreline except in the backs of coves and areas with shallow flats on this end of the reservoir. The upper end of the lake has considerably less contour. Native submerged and emergent vegetation can be problematic in this part of the lake at times, but was not at the time of the survey.

### **Limitations:**

Depth and timing of drawdowns may be limited by the need for the dry hydrants utilized by the local fire department.

Shallow areas and dense stands of hardwood stumps make herbicide applications difficult on the upper end of the lake.

### **Past Control Measures:**

Historic aquatic plant control efforts have included drawdowns which generally have provided several seasons of relief from submerged aquatic vegetation. Foliar herbicide applications to emergent aquatic vegetation along the inhabited shoreline areas have provided some relief to shoreline property owners trying to access the lake from their home or camp. Historically, glyphosate has been used for control of shoreline species at a rate of 0.5 gallons per acre in addition to 0.25 gallons per acre of Red River 90 surfactant.

The lake is monitored on an occasional basis for the presence of giant salvinia.

There were no herbicide treatments made on Mill Creek in 2012.

### **Recommendations:**

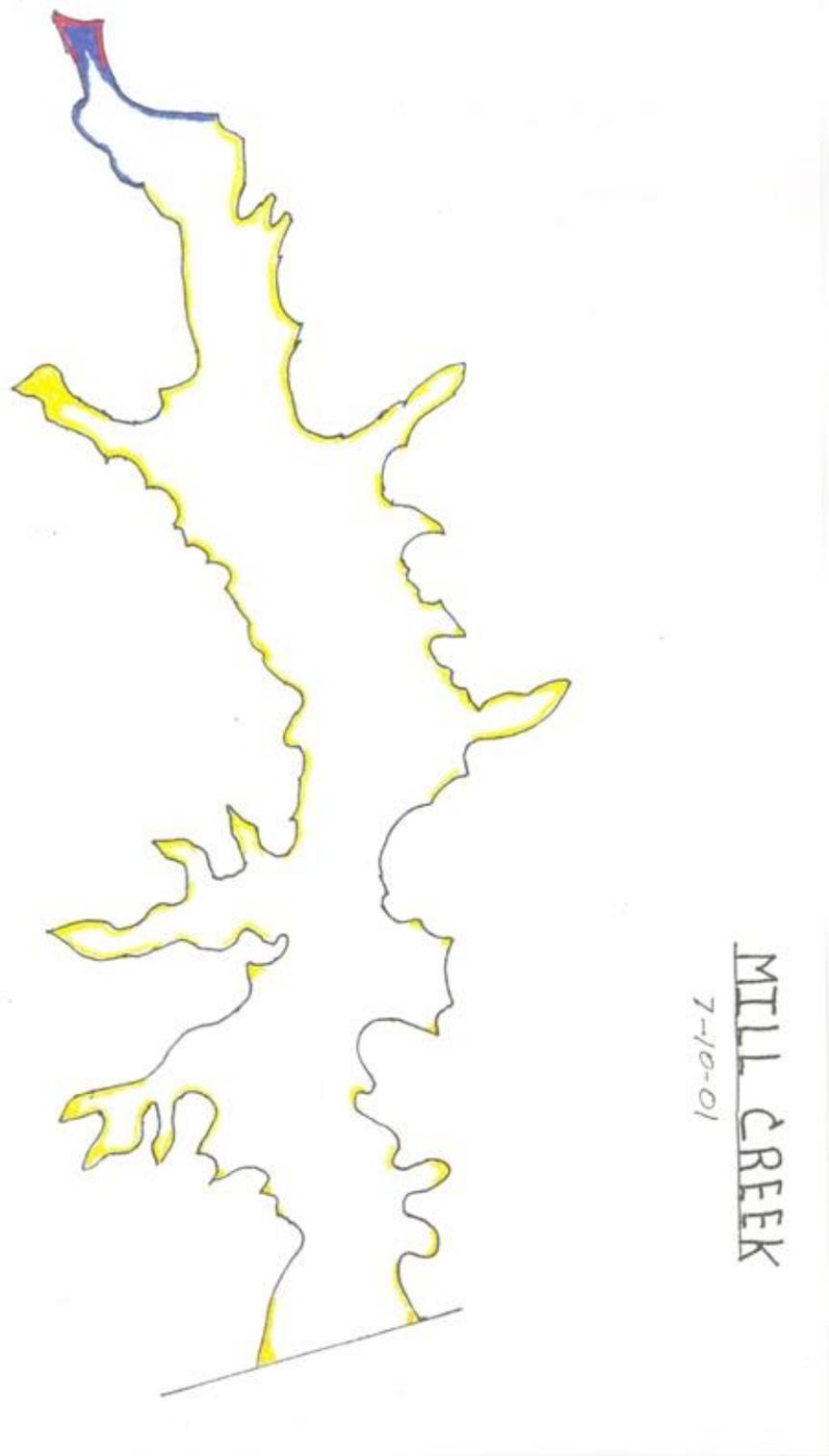
Foliar herbicide treatments by LDWF spray crews are scheduled for control of watershield. Watershield will be controlled by applications of Clearcast (Imazamox) at 0.5 gallons per acre plus one quart per acre of Aquamaster (glyphosate) and one quart per acre of Inergy surfactant.

Surveys to check for giant salvinia on Mill Creek Reservoir will be performed periodically. Subsequent applications will be conducted as necessary.

With LDWF Administrative approval, the Mill Creek Aquatic Vegetation Control Plan will be presented to the Mill Creek Recreation and Water Conservation District Commission on an annual basis.

**Type map**

Vegetation type map surveys were conducted annually by the Aquatic Plant Control Section from 1980-1985, then 1988-1995, and 1997-2001.



Mill Creek Reservoir Typemap – July 2001

## MILL CREEK RESERVOIR

July 2001

Melvin Bagwell

Mill Creek Reservoir was surveyed for the presence of aquatic vegetation on July 10, 2001. At the time of the survey the lake was at pool stage. The water color was clear.

The submersed plants noted were: bladderwort (*Utricularia sp.*), southern naiad (*Najas guadelupensis*), Chara, filamentous algae, fanwort (*Cabomba caroliniana*), coontail (*Ceratophyllum demersum*), and Eliocharis.

The emersed plants noted were: smartweed (*Polygonum sp.*), watershield (*Brasenia schreberi*), Bacopa, white water lily (*Nymphaea odorata*), water primrose (*Ludwigia sp.*), and bulrush.

The estimated percent coverage of submersed plants was 10%.

## Appendix I.

### **RS 38:3087.51**

#### **PART XVIII. MILL CREEK RECREATION AND WATER CONSERVATION DISTRICT**

##### §3087.51. Creation

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

Acts 1995, No. 443, §2, eff. June 17, 1995.

### **RS 38:3087.57**

##### §3087.57. 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; retard runoff of water and soil erosion; construct any ditch, channel improvement, dike, dam, or levee, and repair, improve, and maintain any of said improvements or structures.

(5) Manage and control the water level and growth of aquatic plants in the creek.

(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, and governmental 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, and maintains and operates telegraph, telephone, and other lines for the transmission of intelligence prior to June 17, 1995.

(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 Mill Creek Recreation and Water Conservation District shall have, with respect to the improvements and maintenance of the district, the advice of the Department of Transportation and Development, and it shall 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 said district may request.

C. The district is hereby authorized to incur debt for any one or more of its lawful purposes, to issue in its name negotiable bonds or certificates of indebtedness evidencing such debt, and to 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 Bienville 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, providing 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 Bienville 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 Bienville 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.

Acts 1995, No. 443, §2, eff. June 17, 1995.