

a.

**2013 Hardwater Lake Aquatic Vegetation Control Plan**  
LDWF, Inland Fisheries

1. Waterbody type – natural backwater lake off of Little River in Grant Parish. It is a wooded alluvial floodplain lake that has been impounded. It receives periodic backwater flooding from Little River.
2. Age and condition of control structure - the lake was impounded in the early 1970's. Due to vandalism, the control structure has been modified into a stop-log design. Personal communication with the Grant Parish Police Jury (GPPJ) indicates that the structure may not be operable. Mechanical equipment, either a boom truck or track-hoe, would be required to open the structure. The GPPJ is uncertain whether the structure would be able to be closed once it is open.
3. Type of control structure – Modified stop- log
4. Water level (MSL)- 41 MSL
5. Surface area at pool stage – 513 acres
6. Average depth – 3.5 ft. 8 ft Max
7. Watershed ratio – 1.4 : 1
8. Drawdown potential of structure - At least 5.5 feet if the structure can be opened. The operation of the structure is questionable per personal communication with the GPPJ.
9. Waterbody Board or Lake Commission – Act 858 of 1981 abolished the Hardwater Lake
10. State Game and Fish Preserve and the corresponding Lake Commission. The statute transferred duties of the former Commission to the Louisiana Department of Wildlife and Fisheries (LDWF). However, the legislation allows the governing body (GPPJ) to appoint a lake commission to work under the oversight of LDWF. The current Hardwater Lake Commission was appointed by the Grant Parish Police Jury, but is inactive. Attempts to contact the commission by LDWF District 3 personnel have not been responded to.

Hardwater Lake Commission

P.O. Box 462

Pollock, LA 71467

Primary contact information- Charles Till – President

179 Hugart Rd.

Pollock, LA. 71467

318-765-8786

See Appendix II for the entire list of commissioners as of April 2008.

11. Procedure for spillway openings – LDWF forwards management recommendations to the GPPJ who is responsible for the structure. A mechanical lift of some type (i.e. boom truck, back-hoe, track-hoe etc.) is required to remove the stop-logs. There is concern that the structure may not be able to be closed, thus the lake would not be refilled with water.

<b>DRAWDOWN HISTORY</b>				
Date Opened	Date Closed	Purpose	Results	Issues
August 1995	October 1995	Vegetation control	Unknown	None

12. What significant stakeholders use the lake? What are their needs and concerns?  
Duck hunting and recreational fishing is the primary use of the lake.
13. What is the history of aquatic vegetation complaints?  
Vegetation complaints are sporadic. Following severe winters and/or high water periods, complaints are less frequent. Following mild winters and low water, numerous complaints are received.
14. Have there been any controversial issues on the lake?  
Periodic conflicts arise among lake users. These occur between recreational and commercial fishermen and duck hunters. The GPPJ passed an ordinance prohibiting the use of nets in the lake on August 11, 1983. However, a request to enforce the ordinance was not submitted to the Wildlife and Fisheries Commission for approval thus agents could not enforce the ordinance.  
On August 12, 1993 a similar ordinance to ban netting was passed by the Grant Parish Police Jury. On February 23, 2004 the Wildlife and Fisheries Commission promulgated R.S. 76:171, in accordance with R.S. 56:22 (B). The rule prohibits the use of gill nets, trammel nets, and fish seines in Hardwater Lake.

**Aquatic Vegetation Status:**

As of September 2012, no problem vegetation was found in the lake. Bladderwort, a native submerged plant, encompassed about 20 acres. Less than 5 acres of alligator weed was present in a fringe along the shoreline. Less than 1 acre of common salvinia was observed. Generally, bladderwort is the major vegetation issue. If the lake does not receive flood waters from the Little River for several years, it can become infested. Common salvinia can be found in the lake, but it is not a problem at this time due to colder than normal temperatures during two recent winters (2009-2010 and 2010-2011).

Estimates for 2013 are predicted to be similar to past years. Submergent vegetation should be less than usual (less than 100 acres) due to several high water periods in 2012-2013. Common salvinia is likely to increase due to the lack of freezing temperatures in 2012-2013. Surface coverage in excess of 100 acres is possible.

## Limitations:

Note factors that may limit the effectiveness of chemical, mechanical, or biological control methods for the aquatic plant problems found in the waterbody.

- Small watershed may limit the ability of the lake to refill following a drawdown.
- Large portion of the lake is covered in trees which restricts foliar herbicide applications.
- Lake is prone to back-water flooding during high rainfall events.
- Water control structure does not operate as intended due to vandalism. The GPPJ converted the structure into a stop-log structure.

Note regulatory or public factors or anything else that may limit the ability of LDWF to control aquatic plant problems in the waterbody.

- 2,4 – D waiver required from March 15 thru September 15.
- The GPPJ is reluctant to open the structure due to the possibility that it may not function as designed.

## Past Control Measures:

Control measures have been limited in the past. Only one documented drawdown has been conducted and it occurred in 1995 to help control native submergent vegetation. Periodic foliar applications have been applied by LDWF spray crews primarily for the control of common salvinia. Spray history is listed below.

No plant control changes are needed. Due to severe freezes and several high water events, no complaints have been recorded since 2009.

### Aquatic Vegetation Control

2009 Vegetation/Acres Sprayed

Bladderwort	0.80
Hydrilla	0.20
Salvinia, Common	72.1

No aquatic vegetation control has been needed since 2009 as indicated below.

Herbicides have been applied at the following rates:

Glyphosate (Aquamaster, Aquastar, etc.): Used at a rate of 0.75 gallons per acre to treat alligator weed, water hyacinth and common salvinia during the active growing period.

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

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

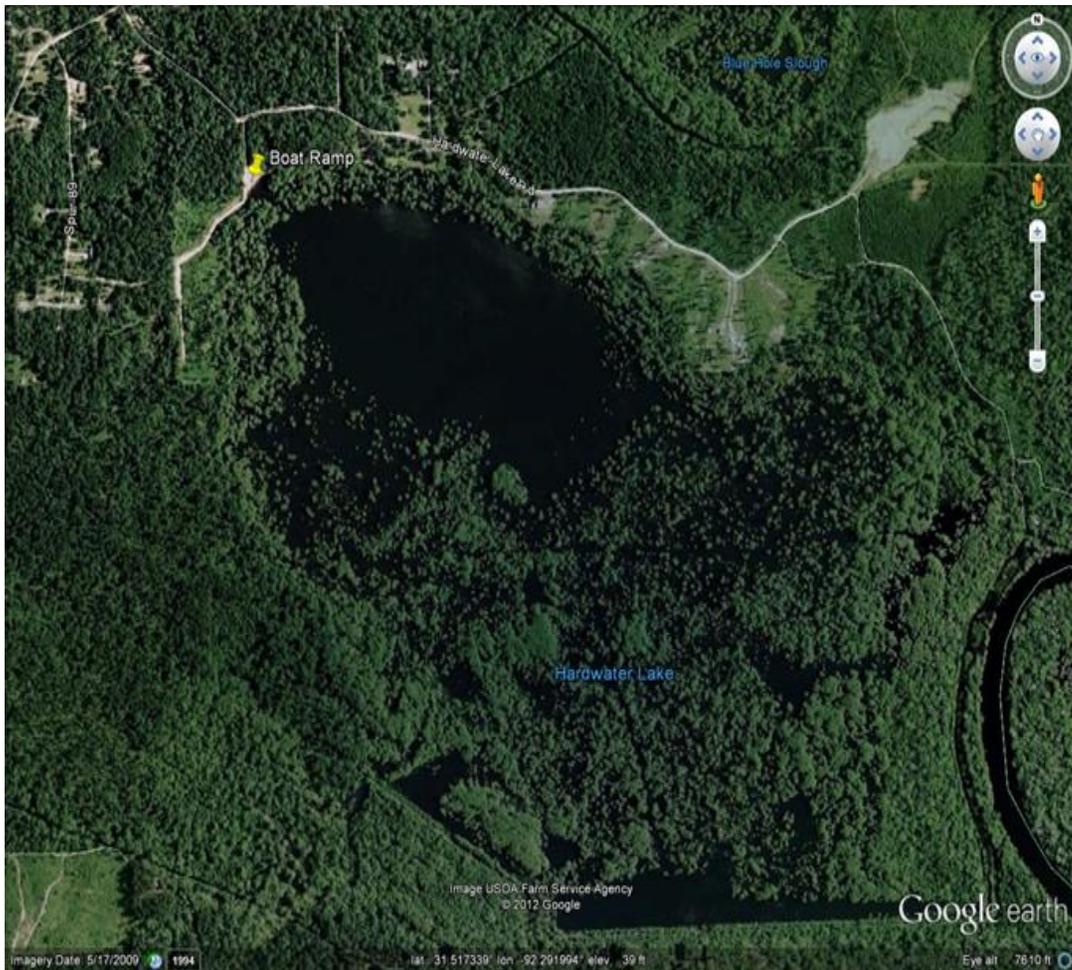
**Recommendations:**

Aquatic technicians will report significant changes in the status of aquatic vegetation following days spraying on the lake. LDWF spray crews will continue spraying emergent vegetation as required with either glyphosate or diquat and an approved surfactant. These herbicides are applied at the rate of 0.75 gallons per acre with the surfactant applied at 0.25 gallons per acre. A diquat/glyphosate mix may be applied to giant salvinia infestations (if it is found in the lake) at a rate of 0.75 gal/acre glyphosate, 0.25 gal/acre diquat, 0.25 gal/acre Aqua King Max, and 8 oz./acre of Thoroughbred.

Aquatic vegetation surveys will be conducted annually in July or August to determine species composition and acreage of aquatic vegetation.

LDWF Inland Fisheries personnel will discuss the status of the control structure with the GPPJ and determine the feasibility of repairs.

**Appendix I** – Map of Hardwater Lake in Grant Parish



## Typemap

Hardwater Lake Vegetation Survey  
August 11, 2009  
Lynn Mathews & Jerry Collins  
Lake Water Level: Pool Elevation

Hardwater Lake is a 513 acre impoundment located 7 miles east of Pollock and 4 miles south of Hwy 8 in Grant Parish. It is owned and controlled by the state of Louisiana and was created primarily for wildlife and fisheries habitat enhancement and recreational opportunities for the citizens of the state. Pool stage is 41.0 MSL and the average depth is 3.5 ft with a maximum depth of about 8 ft. Fluctuations of 2-7 feet are primarily due to backwater overflow from Little River when river stage is at 48.0 M.S.L. This occurs almost every year.

The Lake was surveyed for the presence of aquatic vegetation on August 11, 2009. The water was somewhat clear.

The lake often exhibits problems with submergent vegetation during summer months due to the shallow and clear water lake conditions.

When surveyed this year however the only aquatic vegetation of any consequence was Common Salvinia. It was found along some of the bank, within the trees out from the bank and around the middle of the lake and also some small mats scattered in the open water. The coverage was about 20% of the lake.



## APPENDIX II

Ricky, this is a list of the members of the Hardwater Lake Commission that Mr. Lloyd Kirtland, Police Juror for District No.6 gave me to send to you. Thanks, Cindy Jamison

---

### HARDWATER LAKE COMMISSION (4/08)

Charles Till (President) 179 Hugart Rd. Pollock, LA 71467 318-765-8786	
Wayne Baum 132 Ed Lasyone Rd. Pineville, LA 71360 318-640-2506	Larry Baum 2174 Walker Ferry Rd. Pollock, LA 71467 318-765-9151
J. L. McCartney 508 Dyson Creek Rd. Pollock, LA 71467 318-765-3198	Keith Willett 700 Dyson Creek Rd. Pollock, LA 71467 318-765-9408
Danny Jackson 320 Hwy. 524 Pollock, LA 71467 318-765-3726	Troy Roussell 7138 Hwy 165 Pollock, LA 71467 318-765-9426