

## 2013 Lake Providence Aquatic Vegetation Control Plan

LDWF, Inland Fisheries

### Past Control Measures:

Treatment of water hyacinth and alligator weed by conventional boat spraying continues on an as-needed basis on Lake Providence. This currently involves one spray crew making one or two herbicide applications per year for a lake-wide treatment. These applications normally involve the spraying of glyphosate (0.75 gal/acre), diquat (1 gal/acre), or 2, 4-D (0.5 gal/acre) directly onto the nuisance vegetation. Recently, less than 5 acres of vegetation per year have been treated on Lake Providence. In 2012, no herbicide treatments were necessary for control of nuisance vegetation.

### Aquatic Vegetation Status:

#### General:

Aquatic vegetation complaints have been primarily limited to home owners' concerns of emergent vegetation impacting shoreline property, and excessive coverage of the submerged species southern naiad *Najas guadalupensis* in the shallow areas of the southern end of the lake. Currently, naiad is nearly non-existent in the lake. In 2008, some residents of Lake Providence expressed concern of excessive coverage of alligator weed *Alternanthera philoxeroides*, especially on the south end in a cove near the hospital. A subsequent survey by LDWF personnel revealed total coverage to be 1.35 acres, and posing no imminent threat to the lake. This concern may have arisen from recent news stories of the threat of giant salvinia *Salvinia molesta* to some north Louisiana lakes. The bayous which flow into and out of the lake have been sources of water hyacinth *Eichornia crassipes* infestations in the past. There were no complaints concerning vegetation on Lake Providence in 2012.

#### Coverage and Status of Problem Plant Species as of 12/31/12

- Alligator weed– very little on the lake proper, small amounts found in ditches and bayous connected to lake
- Water hyacinth – insignificant coverage, confined mostly to bayous adjoining the lake
- Submerged Species – insignificant coverage

#### Coverage and Status of Beneficial Plant Species as of 12/31/12

- Coontail – present but isolated in the shallows; coverage is limited by planktonic turbidity

#### Predicted coverage of vegetation for the upcoming year – 2013

All species of aquatic vegetation common to Lake Providence are expected to be found at minimal levels in 2013. Water hyacinth and/or alligator weed may require one to two treatments to reduce coverage in bayous, ditches, and coves.

## **Recommendations:**

The insignificant amount of vegetation in Lake Providence currently dictates no recommendations other than routine herbicide applications by conventional spray boats. LDWF spray crews will be deployed to the lake immediately following any public complaints of vegetation issues, otherwise they will be scheduled to make two applications per year for the control of nuisance emergent or floating vegetation. It is recommended that the control structure be modified to allow for an increased dewatering rate. Up to 4 inches per day would be desired. Drawdowns would become a management option if submerged species were ever to become established in the lake in the future. They could also be used for fisheries improvement purposes and shoreline property maintenance.

Nuisance floating and emergent vegetation will be treated on an as needed basis. The herbicide 2,4-D will be used for water hyacinth control at a rate of 0.5 gal./acre during the non-waiver period (outside of March 15 – Sept. 15) and glyphosate will be used at a rate of 0.75 gal./acre when the waiver period is in effect. Glyphosate (0.75 gal/acre) or imazapyr (0.5 gal/acre) will be used for treatment of most other emergent vegetation with rates used as recommended on the label for particular species.