

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

2018 AQUATIC VEGETATION MANAGEMENT PLAN

SPANISH LAKE

Past Control Measures:

In 2000, an attempt to establish tape grass (*Vallisneria americana*) failed, as no plant growth was observed in the lake. Likely causes for the failure were erratic water levels caused by the leaking control structure, overabundant common carp (*Cyprinus carpio*), and high turbidity. The Spanish Lake Control Structure was repaired in the summer of 2013.

Spanish Lake is a nutrient-rich impoundment with heavy phytoplankton turbidity throughout much of the year. Aquatic plant growth is inhibited by the plankton turbidity. Submerged aquatic vegetation is essentially absent in Spanish Lake. American lotus (*Nelumbo lutea*) occurs in two locations along the breakwater levees. A small amount of water hyacinth (*Eichhornia crassipes*) was observed in the boat landing access channel. Emerged plant species along the shoreline are alligator weed (*Alternanthera philoxeroides*), maidencane (*Panicum hemitomon*), water primrose (*Ludwigia peploides*), duck potato (*Sagittaria latifolia*), Roseau cane (*Phragmites australis*), and cattail (*Typha latifolia*).

No herbicide applications were necessary from 2011 to 2017.

Aquatic Vegetation Status:

In October 2014, water hyacinth, alligator weed, water primrose, and American lotus covered approximately 15 acres total throughout the lake.

In October 2015, water hyacinth, alligator weed, water primrose, and American lotus covered approximately 20 acres total throughout the lake.

In October 2016, water hyacinth, alligator weed, water primrose, common salvinia and American lotus covered approximately 25 acres total throughout the lake. American lotus has increased slightly on the northeast side of the lake. Also detected was a small amount of common salvinia near the boat launch. During the August flood that over-topped the levee, aquatic plants such as common salvinia may have entered the lake.

In October of 2017, water hyacinth, alligator weed, water primrose, common salvinia and American lotus covered approximately 15 acres total throughout the lake. American lotus has decreased some which is located on the northeast end of the lake. Common salvinia is still in small amounts near the launch.

Proposed Control Measures for 2018:

Biological Control

Biological control methods are not needed at this time.

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Chemical Control

Foliar herbicide applications on Spanish Lake will be conducted as needed by LDWF spray crews according to the LDWF Aquatic Herbicide Application Procedures. Herbicides applied will be 2,4-D (0.5 gallons per acre) for water hyacinth, and glyphosate (0.75 gallons per acre) for American lotus. A non-ionic surfactant will be added to all herbicides to increase efficacy. Alligator weed and water primrose will be controlled with imazapyr (0.5 gallons per acre) and Turbulence surfactant (or approved equivalent, 0.25 gallons per acre) in areas that are not developed. Plants growing along developed shorelines will be treated with imazamox (Clearcast, 0.5 gallons per acre) and Turbulence (or approved equivalent) surfactant. Salvinia will be controlled with glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Turbulence (or approved equivalent, 0.25 gal/acre).

Typemaps:

Spanish Lake Vegetation Survey 6-24-2011 - Martin Plonsky

A survey of aquatic vegetation found in Spanish Lake resulted in the conclusion that there is little to no aquatic vegetation in the lake. Very thin amounts of water hyacinth were observed in the vicinity of the boat launch and on the shoreline of the breakwater islands on the eastern side of the lake. The lake water was saturated (“bloom” condition) with planktonic algae and water ph was above 8.0. Small bunches of iris were seen growing along the eastern bank of the lake. Average water depth was 2 feet. The vegetation survey was conducted on the same day we investigated the report of a fish kill at the lake. No dead fish were observed.

Date	Temp	SpCond	Salinity	Depth	pH	Turbidity+	% odo	DO	Chlorophyl
6/24/11	28.18	0.155	0.07	-0.121	9.09	69.5	129.70	10.12	55.8
6/24/11	27.81	0.155	0.07	0.327	8.75	79.8	109.70	8.61	56.0

