

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

2021 AQUATIC VEGETATION CONTROL PLAN

BAYOU LACOMBE COMPLEX

Waterbody Information

1. Waterbody type – A complex including connecting bayous, canals, swamps and marshes that are also associated with the Big Branch Marsh National Wildlife Refuge (NWR), terminating in the northeastern portion of Lake Pontchartrain. Bayou Lacombe, the major bayou in the complex, flows for 20 miles through St. Tammany Parish. It originates in Talisheek, LA near the junction of Louisiana Highway 41 and Louisiana Highway 435, and flows southward to Lake Pontchartrain. The Bayou Lacombe complex is bordered on the west by Bayou Cane, on the east by Bayou Liberty and Bayou Bonfouca, and on the south by Lake Pontchartrain.
2. Watershed - The Bayou Lacombe sub-basin drains approximately 41,600 acres of land area.
3. Waterbody Board or Lake Commission – The State of Louisiana has authority of the state owned water bottoms and regulates the fisheries of Bayou Lacombe. Bayou Lacombe is designated as a natural scenic stream by LA. RS 56:1856: known as “The Louisiana Scenic Rivers Act.” The laws governing Natural and Scenic River Systems regulate some land practices along the bayou and also protect it from hydrologic alterations. The National Wildlife Refuge System, within the U.S. Fish and Wildlife Service (USFWS), manages the Big Branch NWR within the Bayou Lacombe complex.

What significant stakeholders use the lake?

Residential developments, recreational anglers, boaters and hunters.

What are their needs and concerns?

There are requests annually for nuisance plant control, primarily from waterfront residents. The newly established population of giant salvinia (*Salvinia molesta*) is becoming a greater concern to many stakeholders.

Aquatic Vegetation Status:

Water primrose (*Ludwigia spp.*), alligator weed (*Alternanthera philoxeroides*) and giant salvinia have been the primary focus of nuisance aquatic plant control in residential areas of the complex. Giant salvinia continues to spread in Bayou Lacombe, and now extends north of Hwy 190. There was approximately 500 acres of giant salvinia, 200 acres of alligator weed, and 350 acres of water primrose at the time of the 2020 fall survey.

Limitations:

Some infestations of giant salvinia are in the shallow marsh within Big Branch NWR. Access to these areas is limited to surface drives or airboats. The USFWS has additional regulations on herbicides and requires annual approval to treat aquatic vegetation.

Past Control Measures:

Herbicide applications have been made from boat-mounted spray equipment when necessary. Since 2016, 3,968 acres of aquatic vegetation have been treated (Table 1). During 2020, water primrose and common salvinia were the most treated invasive aquatic plants. Herbicides were used in accordance with the approved Aquatic Herbicide Application Procedures (Table 3). District 8 stocked 152,8586 weevils in the marshes of Lake Pontchartrain close to Bayou Lacombe and Cane Bayou in 2019.

Table 1. Acres of vegetation treated by waterbody from 2016-2020 in the Bayou Lacombe complex.

Waterbody	2016	2017	2018	2019	2020	Total
40901 (Upper Bayou Lacombe)	2	5	5	0	0	12
40902 (Lower Bayou Lacombe)	252.62	211	310	340	220	1333.62
40903 (Upper Bayou Cane)	0	10	0	10	0	20
40904 (Lower Bayou Cane)	20	0	40	40	40	140
40905 (Upper Bayou Liberty)	89.91	173	130.01	70	100	562.92
40906 (Lower Bayou Liberty)	16.6	119.01	60	0	20	215.61
40907 (Upper Bayou Bonfuca)	106.6	270	210	170	220	976.6
40908 (Lower Bayou Bonfuca)	147.26	90	0	50	0	287.26
40909 (W-14 Main Diversion Canal)	0	90	0	20	0	110
40910 (Salt Bayou)	0	0	60	70	0	130
41001 (Lake Pontchartrian)	20	90	0	30	0	140
41002 (Lake Pontchartrain)	10	0	20	10	0	40
Total	664.99	1058.01	835.01	810	600	3968.01

Table 2. Acres of vegetation treated during 2020 in the Bayou Lacombe complex

Crew	Waterbody code	Alligatorweed	Water Primrose	Common Salvinia	Giant Salvinia	Sedge	Torpedo Grass	Water Hyacinth	Total
Lacombe 1	40902	32	91	43.5	45.5	2.5	5.5	0	220
	40904	2	2	0	0	0	0	36	40
	40905	7	44	34	8	0	0	7	100
	40906	0	8	6	6	0	0	0	20
	40907	3	77	82.5	24.5	0	3	30	220
Total		44	222	166	84	2.5	8.5	73	600

Recommendations:

Chemical Control:

Regular vegetation assessments and necessary herbicide applications will be made to ensure that all major waterways in the complex remain open and accessible. Requests for nuisance plant treatments primarily come from waterfront residents. LDWF will continue to prioritize and make treatments as necessary in this area. Additional assessments and herbicide applications will be made in areas containing large concentrations of giant salvinia. Aquatic vegetation will be treated as specified in the current LDWF Aquatic Herbicide Application Procedures (Table 3).

Biological Control:

Giant salvinia weevils (*Cyrtobagous salviniae*) will continue to be stocked in areas containing dense populations of the plant. The goal is to establish a self-sustaining population that could potentially provide long-term control.

Containment boom will be strategically placed throughout the complex in an effort to keep giant salvinia from infesting previously unaffected areas. Specifically, infestations of giant salvinia in the shallow marshes within Big Branch NWR will be boomed off to keep giant salvinia from moving into the bayou, as these areas are very difficult to treat by boat.

Physical Control:

None at this time.

Table 3. LDWF Aquatic Herbicide Application Procedures

Plant Species	Herbicide	Surfactant
<i>Salvinia spp. Alternative 1</i> Common/Giant Salvinia (April 1 to October 31)	Glyphosate (0.75 gal/acre) Diquat (0.25 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
<i>Salvinia spp. Alternative 2</i> Common/Giant Salvinia (April 1 to October 31)	Glyphosate (0.75 gal/acre) Flumioxazin (2 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
<i>Salvinia spp. Alternative 3</i> Common/Giant Salvinia (April 1 to October 31)	MSM (1 oz./acre) Flumioxazin (1 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
<i>Salvinia spp. Alternative 4</i> Common/Giant Salvinia (November 1 to March 31)	Diquat (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
<i>Salvinia spp. Alternative 5</i> Common/Giant Salvinia (November 1 to March 31)	Flumioxazin (12 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Water Hyacinth	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
Water Hyacinth in waiver areas (March 15 to September 15)	Glyphosate (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
Alligator Weed/Giant Cut Grass (undeveloped areas)	Imazapyr (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Alligator Weed/Giant Cut Grass (developed areas)	Imazamox (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
American Lotus	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
American Lotus in waiver areas (March 15 to September 15)	Glyphosate (0.5 gal/acre)	Nonionic surfactant (0.25 gal/acre)
American Lotus in waiver areas with potable water intakes (March 15 to September 15)	Triclopyr (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Duckweed	Diquat (1.0 gal/acre) or Flumioxazin (8 oz./acre)	Nonionic surfactant (0.25 gal/acre) or Turbulence (or approved equivalent, 0.25 gal/acre)
Cuban Bulrush (sedge)	2, 4-D (0.5 gal/acre)	Nonionic surfactant (1 pint/acre)
Cuban Bulrush (sedge) in waiver areas (March 15 to September 15)	Glyphosate (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
Water Lettuce	Diquat (1.0 gal/acre) or Flumioxazin (6 oz./acre)	Nonionic surfactant (0.25 gal/acre) or Turbulence (or approved equivalent, 0.25 gal/acre)