

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES



OFFICE OF FISHERIES
INLAND FISHERIES SECTION

2018
AQUATIC VEGETATION MANAGEMENT PLAN

BAYOU BONNE IDEE

Past Control Measures:

Control of nuisance aquatic vegetation on Bayou Bonne Idee has been necessary since the construction of the numerous weirs and dams began in the 1950's. Herbicide treatments are routinely made to control the floating species duckweed (*Lemna spp.*) and water hyacinth (*Eichhornia crassipes*). Alligator weed (*Alternanthera philoxeroides*), water primrose (*Ludwigia spp.*), and water pennywort (*Hydrocotyle spp.*) are the most abundant emergent species, and require frequent control. Duckweed has been controlled primarily with diquat dibromide (1.0 gal/acre). Water hyacinth was treated with either glyphosate (0.75 gal/acre), imazapyr (0.5 gal/acre), 2,4-D (0.5 gal/acre), or diquat dibromide (0.75 gal/acre). Other emergent plant species were treated primarily with glyphosate (0.75 gal/acre), imazapyr (0.5 gal/acre), or 2,4-D (0.5 gal/acre). Table 1 lists the acres of nuisance vegetation in Bayou Bonne Idee treated with herbicides during 2013-2017. A list showing acreage sprayed since 2005 can be seen in the Bayou Bonne Idee Management Plan Part A (updated February 2016).

Table 1. Total acres of nuisance aquatic vegetation treated with herbicide on Bayou Bonne Idee in 2013-2017.

Year	Species				
	Alligator weed	Duckweed	Water Hyacinth	Water pennywort	Water primrose
2013	449	32	120	16	28
2014	147	-	5	-	55
2015	186	-	-	-	38
2016	88	-	80	7	-
2017	91	-	36	-	25

A containment boom was placed north of Hwy. 2 in the spring of 2013 in an effort to reduce the spread of duckweed downstream. Much of the duckweed in Bonne Idee originates in the forested upper reaches. The boom was somewhat successful in containing floating vegetation, where LDWF spray crews can efficiently treat it. The boom was removed later that year, as it was more urgently needed at Turkey Creek Lake.

Aquatic Vegetation Status:

General:

Coverage of floating and emergent aquatic vegetation in Bayou Bonne Idee occasionally poses a threat to fisheries habitat, navigation, and shoreline property owners. The emergent species alligator weed and water hyacinth continued to be the most troublesome species in 2017, although no serious infestations occurred. A few complaints were made by homeowners concerning extensive growth of alligator weed around private piers. Duckweed, which has been troublesome in the past, has been insignificant in recent years. Water

turbidity can be high, which limits the growth of submerged species.

Coverage and Status of Problem Plant Species in 2017

-Alligator weed – found near the shoreline and in shallow pockets throughout the lake, but did not produce any significant problems.

-Water hyacinth –forming surface mats in some protected coves; total coverage not problematic.

Coverage and Status of Beneficial Plant Species in 2017

-Coontail (*Ceratophyllum demersum*) – common in most areas of the lake; although there are no dense stands, coverage is considered near optimal or slightly below for fisheries habitat

Aquatic Vegetation Prediction for 2018

Coverage of all aquatic plant species is predicted to be similar to amounts observed in 2017.

The frequency and duration of sub-freezing temperatures during the winter will affect the total coverage of emergent and floating species in the upcoming spring.

Recommendations:

Areas where aquatic vegetation has historically caused problems should be surveyed at least monthly and treated as needed. Complaints should be followed up as soon as possible. Treatments of alligator weed and other nuisance emergent species should be prioritized by applying herbicides around residential areas first, and then any areas where significant surface mats have formed. The following herbicides and rates are recommended:

-Duckweed: diquat dibromide (1 gal/acre) with 90:10 non-ionic surfactant* (0.25gal/acre)

-Water Hyacinth:

March 15 – Sept. 15 – glyphosate (0.75 gals/acre) with 90:10 non-ionic surfactant (0.25gal/acre)

Sept. 16 – March 14 – 2,4-D (0.5 gals/acre) with 90:10 non-ionic surfactant (1 pt./acre)

-Emergent species:

Residential areas - imazamox (0.5 gal/acre) with Turbulence surfactant (or approved equivalent, 0.25 gal/acre)

Undeveloped areas - imazapyr (0.5gal/acre) with Turbulence surfactant (or approved equivalent, 0.25 gal/acre)

*Activate Plus 90:10 non-ionic surfactant to be used in 2018