

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

2018 AQUATIC VEGETATION CONTROL PLAN

PEARL RIVER BASIN

1. Waterbody type – Natural river system including the Pearl River, Bogue Chitto River, Middle Pearl, West Middle Pearl, West Pearl, The West Pearl River Navigation Canal (WPRNC), and Little Lake.
2. Age and condition of control structure (if applicable) – The WPRNC was completed in 1957. It was a navigation project that included channelization of the Pearl River and a parallel canal with three locks. This project was not designed for drawdown purposes. In 1990, a USACE study concluded that the project was no longer economically viable. Funding for the project was withdrawn and maintenance halted.
3. Type of control structure - There are two low head sills and three locks in the WPRNC. The Pools Bluff sill (PBS) is located at the upper end of the navigation canal near river mile (RM) 48.7. It is 350 feet wide and built out of reinforced concrete. It is designed to maintain a navigable depth in the Pearl River to Bogalusa. The Bogue Chitto Sill (BCS) is located near river mile RM 44 between locks 2 and 3. It is 250 feet wide and built out of reinforced concrete. It is designed to maintain a navigable depth in the parallel canal between locks 2 and 3. In 2003, the project exceeded its 50-year project life and USACE began the deauthorization process. In 2005, USACE abandoned the project and ceased to operate or maintain any of the structures associated with the project. These structures include locks 1, 2, and 3, boat ramps at Pools Bluff and lock 1, and boat portages at the sills. Today, there is no method of boat portage available at the sills and the gates at locks 1, 2 and 3 are inoperable.
4. Waterbody Board or Lake Commission – Fish and wildlife resources are managed by the Louisiana Department of Wildlife and Fisheries (LDWF).

What significant stakeholders use the lake?

Home and camp owners, recreational and commercial fishermen, boaters, hunters, trappers, shipping and commerce

What are their needs and concerns?

Public access is the primary focus of invasive aquatic weed control in this area. Floating, emergent, and submerged plants are managed for this purpose.

Aquatic Vegetation Status:

Water hyacinth (*Eichhornia crassipes*), giant salvinia (*Salvinia molesta*), common salvinia (*Salvinia minima*), alligator weed (*Alternanthera philoxeroides*), and duckweed (*Lemna spp.*) have been the primary nuisance aquatic plants in the system.

Plant estimates as of 12/2017:

Water hyacinth	1250 acres
Common salvinia	1500 acres
Duckweed	50 acres
Alligator weed	200 acres
Giant salvinia	150 acres
Submersed vegetation	250 acres

Limitations:

Water hyacinth, giant salvinia, and common salvinia grow throughout the bald cypress (*Taxodium distichum*) and water tupelo (*Nyssa aquatica*) swamps of the Pearl River Floodplain. These shallow, forested areas occur on public and private lands, and are nearly impossible to access with conventional spray equipment. In addition, when the magnitude of water level fluctuation reaches certain highs and lows, these noxious plants are allowed to move into and out of navigable waterways.

Past Control Measures:

Table 1. Area (acres) of aquatic nuisance vegetation sprayed by year (2009 – 2017) and species in the Pearl River Basin, LA.

Year	Vegetation	Acres (treated)
2009	Alligator weed	32
	Salvinia, Common	298
	Water Hyacinth	220
	Total	550
2010	Alligator weed	48
	Duckweed	33
	Salvinia, Common	333
	Water Hyacinth	266
	Total	680
2011	Salvinia, Common	218
	Sedge (<i>Carex spp.</i>)	12
	Spatterdock (<i>Nuphar luteum</i>)	10
	Torpedograss (<i>Panicum repens</i>)	26
	Water Hyacinth	130
	Total	396
2012	Alligator weed	15
	Giant cutgrass (<i>Zizaniopsis miliacea</i>)	7
	Duckweed	15
	Water Pennywort (<i>Hydrocotyle spp.</i>)	8
	Water primrose (<i>Ludwigia spp.</i>)	15
	Salvinia, Common	233
	Torpedograss	3

	Water hyacinth	97
	Total	393
2013	Primrose	5
	Salvinia, Common	83
	Water Hyacinth	73
	Alligatorweed	26
	Pennywort	20
	Water Hyacinth	59
	Duckweed	14
	Total	280
2014	Alligatorweed	37
	Pennywort	5
	Primrose	25
	Salvinia, Common	47
	Sedge	2
	Torpedograss	5
	Water Hyacinth	4
	Total	124
2015	Alligatorweed	16
	Pennywort	3
	Primrose	13
	Salvinia, Common	68
	Sedge	1
	Torpedograss	5
	Water Hyacinth	12
	Total	119
2016	Alligatorweed	26
	Primrose	40
	Salvinia, Common	22
	Sedge	2
	Torpedograss	2
	Water Hyacinth	74
	Total	166
2017	Alligatorweed	20.5
	Primrose	11.5
	Salvinia, Common	46.5
	Salvinia, Giant	25.5

	Torpedograss	11
	Water Hyacinth	60
	Total	175

Recommendations:

To maintain public access, foliar applications to floating vegetation in the Pearl River will be necessary. Unless conditions change, one to two treatments will be applied annually. Water hyacinth and common salvinia have been the primary focus of vegetation control efforts in this area. Water hyacinth will be treated with a mixture of 2,4-D (0.5 gal/acre) and a non-ionic surfactant (1 pint/acre). Common salvinia will continue to be treated with a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Turbulence (or approved equivalent, 0.25 gal/acre) surfactant from April 1- October 31. Diquat (0.75 gal/acre) and a non-ionic (0.25 gal/acre) surfactant will be used from November 1 – March 31. LDWF personnel will continue to investigate public complaints concerning aquatic vegetation and conduct appropriate action in a timely manner.

Annual vegetation surveys will be conducted to monitor the acreage of existing vegetation and the introduction of new species, primarily giant salvinia.

Biological control for common and giant salvinia will be stocked as necessary and available.