

LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

2021 AQUATIC VEGETATION CONTROL PLAN

BAYOU TECHE

Bayou Teche is a 125-mile long waterway in south central Louisiana. The Teche, as it is known, begins in Port Barre where it draws water from Bayou Courtableau and then flows southward to meet the Lower Atchafalaya River at Patterson, LA. After the levees were built along the Atchafalaya River in the 1930s, the Teche and the rice farms located along the bayou suffered a drastic reduction in fresh water. Between 1976 and 1982, the United States Army Corps of Engineers built a pumping station at Krotz Springs to pump water from the Atchafalaya River into Bayou Courtableau.

Waterbody Information

Waterbody Type:

Bayou that runs from Port Barre, LA to Patterson, LA.

Parish/Location:

St. Landry, St. Martin, Iberia and St. Mary Parishes in LA

Size (surface acres):

Approximately 125 miles long and 150 feet wide (2,273 surface acres)

Watershed:

Lies within the Teche/Vermilion Basin

Watershed Ratio: Unknown

Water Control Structures:

Description:

There are two control structures along Bayou Teche. The first one is in St. Martinville, LA (Keystone locks) and the second is in Patterson, LA (Calumet locks) which leads into the Wax Lake outlet.

Age and Condition:

30 years old / good condition

Ownership:

State of Louisiana owns the water bottoms and the Louisiana Department of Wildlife and Fisheries (LDWF) manages the fish and wildlife resources.

Pool stage:

Average Depth – five feet

Border Waters:

Atchafalaya River, Henderson Lake and Fausse Point Lake

What significant stakeholders use the lake?

This system is used primarily for recreational activities such as fishing, hunting and boating. Other uses are for agricultural practices such as sugar cane production.

What are their needs and concerns? What is the history of aquatic vegetation complaints?

The stakeholders want to make sure that Bayou Teche is navigable and useable. Water hyacinth (*Pontederia crassipes*) lines the banks, but herbicide applications have kept the plant under control. In addition, common salvinia (*Salvinia minima*) has spread throughout the bayou, but herbicide applications have curtailed the growth of this plant as well.

Have there been any controversial issues on the lake?

Low water levels from St. Martinville, LA to Patterson, LA make navigation dangerous during drought conditions.

Past Control Measures:

Biological:

None

Chemical:

In 2011, 2,4-D was applied at a rate of 0.5 gallons per acre to control water hyacinth, alligator weed (*Alternanthera philoxeroides*) and water primrose (*Ludwigia spp.*). Diquat and glyphosate were applied separately at 0.75 gallons per acre to control common salvinia.

In 2012, foliar herbicide applications were made on nuisance plants such as water hyacinth, alligator weed, water primrose, common salvinia and giant salvinia (*Salvinia molesta*) in Bayou Teche. A total of 473 gallons were applied to 888 acres. To control water hyacinth, alligator weed and water primrose, 2, 4-D was applied at a rate of 0.5 gallons per acre. A diquat (0.25 gal/acre) and glyphosate (0.75 gal/acre) mix was applied to control common and giant salvinia.

In 2013, foliar herbicide applications were made on nuisance plants such as alligator weed, water primrose, Cuban bulrush, common & giant salvinia, and water hyacinth for a total of 958 acres sprayed. To control water hyacinth, alligator weed and water primrose, 2, 4-D was applied at a rate of 0.5 gallons per acre. A diquat (0.25 gal/acre) and glyphosate (0.75 gal/acre) mix was applied to control common and giant salvinia.

In 2014, foliar herbicide applications were made on nuisance plants such as water hyacinth, alligator weed, water primrose and common salvinia in Bayou Teche. A total of 68 gallons were applied to 110 acres. To control water hyacinth and white water lily (*Nymphaea odorata*), 2, 4-D was applied at a rate of 0.5 gallons per acre. To control common & giant salvinia and alligator weed, a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Aqua King Plus (0.25 gal/acre) and Air Cover (12 oz/acre) surfactants was applied.

In 2015, foliar herbicide applications were made on nuisance aquatic plants such as water hyacinth, water primrose, and giant and common salvinia in Bayou Teche. A total of 45 gallons were applied to 80 acres. To control water hyacinth and water primrose, 2, 4-D was applied at a rate of 0.5 gallons per acre. To control common & giant salvinia, a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Aqua King Plus (0.25 gal/acre) and Air Cover (12 oz./acre) surfactants was applied.

Also in 2015, boat spray contractors were used from October 13th – 15th, for a foliar herbicide application on water hyacinth in Bayou Teche from Franklin to Calumet Cut in St. Mary Parish. A total of 80 gallons were applied to 160 acres. To control water hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre with a surfactant (Activate Plus) at a rate of 0.25 gallon per acre.

In 2016, foliar herbicide applications were made on nuisance aquatic plants such as water hyacinth, giant cutgrass (*Zizaniopsis miliacea*), and giant and common salvinia in Bayou Teche. A total of 152 gallons were applied to 233 acres. To control water hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre. To control common & giant salvinia, a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Aqua King Plus (0.25 gal/acre) and Air Cover (12 oz./acre) surfactants was applied. To control cutgrass, imazapyr mixed with Turbulence (0.25 gal. /acre), a methylated vegetable oil surfactant, was applied.

Also in 2016, boat spray contractors were used for a foliar herbicide application targeting water hyacinth in Bayou Teche from Franklin to Calumet Cut in St. Mary Parish. To control water hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre with a non-ionic surfactant (Activate Plus) at a rate of 0.25 gallons per acre. A total of 120 gallons were applied to 224 acres.

In 2017, foliar herbicide applications were made on nuisance aquatic plants such as water hyacinth and water pennywort (*Hydrocotyle spp.*). To control water hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre. A total of 15 gallons were applied to 30 acres.

Also in 2017, boat spray contractors were used for a foliar herbicide application targeting water hyacinth in Bayou Teche from Baldwin to Centerville in St. Mary Parish. To control water hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre with a surfactant. A total of 158.75 gallons were applied to 294 acres.

In 2018, boat spray contractors were used for a foliar herbicide application targeting water hyacinth in Bayou Teche from Baldwin to Centerville in St. Mary Parish. To control water hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre with a surfactant. A total of 80 gallons were applied to control 160 acres, which required five days to complete.

In 2019, boat spray contractors were used for a foliar herbicide application targeting water hyacinth in Bayou Teche from Franklin to Centerville in St. Mary Parish. To control water hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre with a nonionic surfactant. A total of 65 gallons were applied to control 130 acres, which required three days to complete.

In 2020, foliar herbicide applications were made on nuisance aquatic plants such as common salvinia in Bayou Teche. A total of 12.5 gallons were applied to 16 acres. To control common salvinia, a mixture of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Turbulence (0.25 gal/acre) surfactant was applied.

Also in 2020, boat spray contractors were used for a foliar herbicide application targeting water hyacinth in Bayou Teche from Franklin to Wax Lake outlet in St. Mary Parish. To control water

hyacinth, 2, 4-D was applied at a rate of 0.5 gallons per acre with a surfactant. A total of 64 gallons were applied to 128 acres.

Physical:

None

Aquatic Vegetation Status:

As of October 2020, aquatic plant coverage was slightly above normal levels. Water hyacinth remains the dominant aquatic plant present, with giant and common salvinia, giant cutgrass and submersed vegetation such as hydrilla (*Hydrilla verticillata*), fanwort (*Cabomba caroliniana*) & coontail (*Ceratophyllum demersum*) scattered throughout the system.

Plant growth projections for 2021:

Hydrilla – slight amount along shoreline of bayou

Water hyacinth – moderate to high amounts in the lower and upper section of Bayou Teche in St. Mary parish

Coontail and fanwort – slight amount along shoreline of bayou

Common salvinia – spread throughout, but more abundant in the lower Bayou Teche in St. Mary Parish

Giant salvinia – small to moderate amounts located in the lower Bayou Teche in St. Mary parish.

Giant cut grass –moderate amount along shoreline of bayou

*The northern half of Bayou Teche, from Port Barre to St. Martinville, has light amounts of aquatic vegetation. The spray crews typically spend most of their time in the lower section from New Iberia to Patterson in St. Mary Parish. In 2020, water hyacinth amounts have increased towards the later part of the year, therefore abundance of water hyacinth is expected for 2021. Common and giant salvinia are also located in the lower section. Moderate to light amounts in this section are expected.

Limitations:

Spray crews have to be very careful when applying herbicides to control aquatic plants because of numerous homes along the bayou.

Recommendations:

Continue to control emergent and floating vegetation with spray herbicides in accordance with the approved LDWF Aquatic Herbicide Application Procedures:

Plant Species	Herbicide	Surfactant
<i>Salvinia</i> spp. Alternative 1 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</i> spp. Alternative 2 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</i> spp. Alternative 3 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</i> spp. Alternative 4 Common/Giant Salvinia (November 1 to March 31)	Diquat (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
<i>Salvinia</i> spp. Alternative 5 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 (0.5gal/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)

Bayou Teche Map

