

# **LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES**



**OFFICE OF FISHERIES  
INLAND FISHERIES SECTION**

**2021 AQUATIC VEGETATION CONTROL PLAN**

**OLD RIVER (BIVENS)**

## Waterbody History

Old River was impounded with the construction of a low earthen dam across an inactive river scar channel on the east bank of the Sabine River in western Beauregard Parish. The surrounding riparian zone consists primarily of bottomland hardwoods with bald cypress (*Taxodium distichum*)/water tupelo (*Nyssa aquatica*) swamps interspersed throughout. Many shorelines are fringed with buttonbush (*Cephalanthus occidentalis*) and other terrestrial plants. It is a small, sheltered impoundment that creates excellent habitat for aquatic plant growth.

## Waterbody Information

### ***Waterbody Type:***

Impounded scar channel of the Sabine River. The lower quarter of the waterbody is below the dam and is not impounded.

### ***Parish/Location:***

Beauregard Parish near Bivens.

### ***Date Created:***

Unknown: formed by natural geologic processes when Sabine River changed course.

### ***Size (surface acres):***

Upper section (impounded) 275 acres

Lower section (natural) 100 acres

### ***Watershed Ratio:***

Approximately 177:1

### ***Impoundment:***

1940's

### ***Water Control Structures:***

None

### ***Ownership:***

State of Louisiana owns the water bottom and the LA Department of Wildlife & Fisheries manages the fish and wildlife resources.

### ***Pool stage:***

N/A

Average Depth – 8.0 feet

### ***Stakeholders:***

Camp owners and recreational fishermen; LDWF usually receives annual complaints regarding common salvinia (*Salvinia minima*).

## Past Control Measures:

### *Biological Control:*

Salvinia weevils (*Cyrtobagous salviniae*) were stocked at two sites in summer 2007. This stocking was ineffective, as no long term control was provided. Damage from *Samea* moths has been observed, but no effective control was provided.

### *Chemical Control:*

This water body has had numerous problems with common salvinia dating back approximately a decade (Table 1). Repeated treatments have proven to be the only reliable method of control as the plant material moves out of inaccessible areas during the summer. Some years are worse than others for no known reason.

Table 1. Old River at Bivens herbicide treatment applications 2006-2020.

Year	Number of Treatments*	Acres Treated	Primary Vegetation Treated
2006	13	176	Common salvinia, Parrot feather ( <i>Myriophyllum aquaticum</i> ), Alligator weed ( <i>Alternanthera philoxeroides</i> )
2007	3	34	Common salvinia
2008	10	147	Common salvinia, Sedge ( <i>Carex</i> spp.), Alligator weed
2009	14	397	Common salvinia, Parrot feather, Alligator weed, Sedge
2010	1	36	Common salvinia, Sedge, Alligator weed
2011	9	288	Common salvinia, Sedge
2012	9	266	Common salvinia, Sedge, Alligator weed
2013	12	379	Common salvinia
2014	5	170.3	Common salvinia, Sedge
2015	3	64.3	Common salvinia
2016	1	19	Common salvinia
2017	3	87.3	Common salvinia, Alligator weed, Sedge
2018	1	33.3	Common salvinia, Parrot feather
2019	0	0	n/a
2020	0	0	n/a

\*For reporting purposes, a treatment is defined as one crew for one day.

### *Physical Control:*

Hard freezes and late freezes have proven to be beneficial in the past.

## **Aquatic Vegetation Estimates:**

Predicted for 2021

Common salvinia (75 acres)

## **Limitations:**

- No drawdown capability.
- Cypress and tupelo trees limit access and preclude effective spraying in some areas.
- Surrounding private swamps and low lying areas provide refuge for salvinia.

## **Recommendations:**

### *Biological Control:*

When common salvinia weevils are available, stocking will focus on associated swamps and sloughs not accessible by spray vessels to address nursery grounds that are perennial sources of re-infestation.

### *Chemical Control:*

LDWF will continue to control emergent and floating vegetation with herbicides in accordance with the LDWF Aquatic Herbicide Application Procedures as needed. Herbicides used to treat aquatic vegetation will be applied at the rates found in Table 2.

Table 2. LDWF Aquatic Herbicide Application Procedure.

<b>Plant Species</b>	<b>Herbicide</b>	<b>Surfactant</b>
<b><i>Salvinia</i> spp. Alternative 1</b> 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)
<b><i>Salvinia</i> spp. Alternative 2</b> 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)
<b><i>Salvinia</i> spp. Alternative 3</b> Common/Giant Salvinia (April 1 to October 31)	MSM (1 oz./acre) Flumioxazin (1 oz./acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
<b><i>Salvinia</i> spp. Alternative 4</b> Common/Giant Salvinia (November 1 to March 31)	Diquat (0.75 gal/acre)	Nonionic surfactant (0.25 gal/acre)
<b><i>Salvinia</i> spp. Alternative 5</b> 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)
Alligatorweed/Giant Cut Grass (undeveloped areas)	Imazapyr (0.5 gal/acre)	Turbulence (or approved equivalent, 0.25 gal/acre)
Alligatorweed/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)

*Physical Control:*

None at this time.

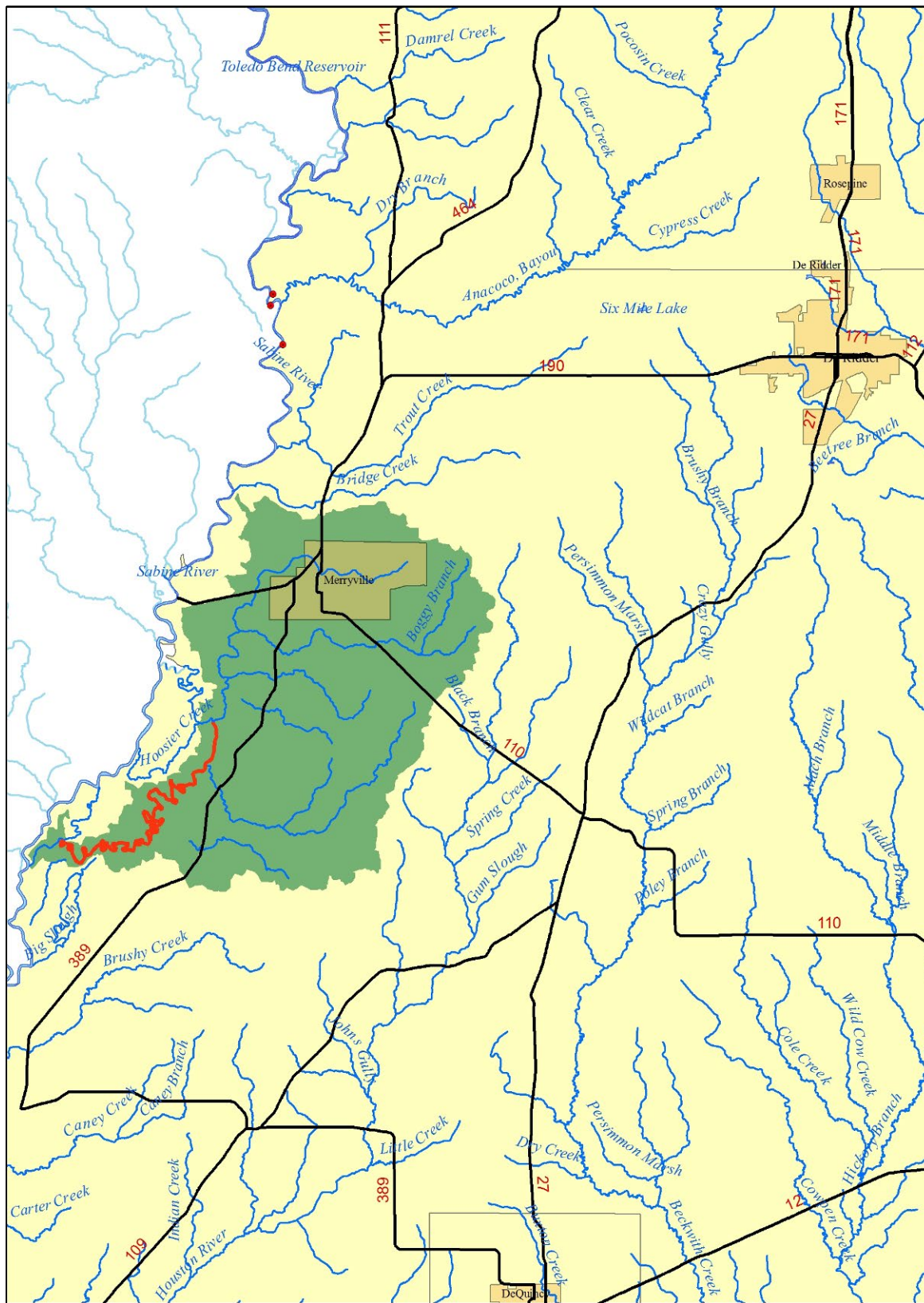


Figure 1. Map of Old River and Old River watershed in Beauregard parish (Scale: 0.5"=3 miles)