LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

WOOLEN LAKE

LAKE HISTORY & MANAGEMENT ISSUES
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LAKE HISTORY

GENERAL INFORMATION

Date Lake formed
Woolen Lake is a completely separated oxbow of the Boeuf River.

Impoundment
The State of Louisiana owns the waterbody.
<http://doa.louisiana.gov/slo/slabsdataaccess.htm>

Size (surface area)
240 acres

Watershed
The watershed consists primarily of agricultural land (cotton, corn, soybean, rice and cattle farms) and small woodlands. There are numerous single-family homes and camps along the shoreline.

Pool Stage
56.0 feet Mean Sea Level (MSL)

Parish
Woolen Lake is located in southwest Richland Parish (Figure 1).

Figure 1. Map showing location of Woolen Lake in Richland Parish, Louisiana.
Spillway width
The spillway portion of the concrete structure is 6.0 ft. wide (Figure 2).

Figure 2. Photo of spillway on Woolen Lake, Richland Parish.

Drawdown description
The structure has no capability of dewatering the lake. If the lake were to be drawn down, a pump or siphon would be required to move water across the spillway and into the culvert that drains into the Boeuf River. The water depth in front of the structure is four feet at pool stage.

LAKE AUTHORITY

The Richland Parish Police Jury (RPPJ) currently has authority on water control issues. The Woolen Lake Commission, previously established by Parish Resolution 08-03-09-01 is no longer a functioning entity.

Primary contact information –
- Richland Parish Police Jury – Parish Works Department
- Joey Evans – (318) 282-9080

Maps
Available through the Richland Parish Police Jury or the Natural Resource Conservation Service - Rayville field office.

Access
Currently, there is one open boat launch on Woolen Lake. It is located off of Woolen Lake Rd. on the south end of the lake. There is a three dollar launching fee. The GPS coordinates are: N 32.192194, W -91.957486
Boat Docks
There are no public boat docks on Woolen Lake.

Piers
There are numerous private piers on Woolen Lake associated with residential houses and camps. No public piers are available.

PHYSICAL DESCRIPTION OF LAKE

Shoreline length
7 miles

Timber type
Standing timber within the lake bottom is comprised of bald cypress (*Taxodium distichum*). Timber in the surrounding lands is minimal and comprised primarily of native hardwood species.

Average depth
5 feet

Maximum depth
15 feet

Natural seasonal water fluctuation
2-3 feet

Shoreline development by landowners
Residential with boat houses and piers, some cattle pasture

EVENTS / PROBLEMS

Fisheries Decline (1970's – 1980’s)
LDWF biomass sampling with the use of the fish toxicant, rotenone indicated a decline in sportfish throughout the 1970’s into the early 1980’s. Significant shifts in the overall fish population were documented. The percentage of predatory gamefish in the population declined from 58.9% in 1971 to 12.5% in 1984. Reproduction of largemouth bass *Micropterus salmoides* and crappie *Pomoxis spp.* also declined. The decline was attributed to excessive irrigation from Woolen Lake to nearby rice crops. The results included very low water levels in late summer. This irrigation, combined with the small watershed of Woolen Lake, led to extended periods of low water. The use of water from the Boeuf River to refill the lake was recommended by some, though the Louisiana Department of Wildlife and Fisheries (LDWF) opposed, citing decreased water quality and introduction of rough fish species. Irrigation water for rice and other agricultural crops in the area is now primarily supplied by the Boeuf River.

Controversial issues on the lake
Agricultural irrigation, primarily for rice production in the 1970’s – 1980’s, was blamed for excessively low water levels in the lake. LDWF had concern of nuisance submerged vegetation becoming established during extended periods of low water. The option to refill the lake by
diverting water from the Boeuf River through the control structure was initially opposed by LDWF in 1975, but in 1977 it was agreed that turbid water from the Boeuf River may act as a suppressor of submerged vegetation. LDWF once again opposes this action due to the risk of introduction of Asian carp into the lake. In 1987, the weir on Price’s Bayou was raised 6 inches to hold more water in the lake and help alleviate the frequent low water situation.

There has been some dispute over the legality of the Police Jury appointing a lake commission to govern Woolen Lake. There have been many lake commission members appointed by the Police Jury since the 1960’s under the guidance of LA RS 56:721. The controversy stems from the lake bottom being State-owned, as per declaration of the State Lands office in 1987 (letter on file). The District Attorney’s office of the Fifth Judicial District, in a letter dated 8-11-2009 (Appendix B), declared that because Woolen Lake is owned by the State, the Parish has no authority to appoint a lake commission. It also states that a lake commission would only be authorized if legislation created a specific statute for a commission on Woolen Lake.

Flooding
None documented. Occasionally, at very high levels, the Boeuf River has back-flowed into Woolen Lake through the drainage structure.

Water Supply
Woolen Lake has been used for agricultural irrigation, though irrigation is now primarily for residential purposes.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Coverage of aquatic vegetation is typically minimal on Woolen Lake. Alligator weed Alternanthera philoxeroides is common along the immediate shoreline and can become excessive in the shallow cove off of White Perch Rd. on the north end of the lake. Minimal amounts of water hyacinth Eichhornia crassipes and duckweed Lemna spp. are found in the lake. Submerged vegetation is limited to scattered coontail Ceratophyllum demersum in the shallows. The naturally high turbidity of this lake limits the growth of submerged vegetation.

Type map
No vegetation type map surveys have been conducted on Woolen Lake

Treatment history by year available
Applications of glyphosate, diquat dibromide, and 2,4-D have been required on occasion to control emergent and floating species when they have become a nuisance to homeowners. Most of the applications have been for water hyacinth, duckweed, and alligator weed. Information in Table 1 includes the total acreage sprayed on Woolen Lake since 2010.
Table 1. Total acres of vegetation treated on Woolen Lake, 2010 – 2014.

<table>
<thead>
<tr>
<th>Year Sprayed</th>
<th># Acres Sprayed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>47</td>
</tr>
<tr>
<td>2011</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>42</td>
</tr>
<tr>
<td>2013</td>
<td>21</td>
</tr>
<tr>
<td>2014</td>
<td>20</td>
</tr>
</tbody>
</table>

HISTORY OF REGULATIONS

Recreational
Statewide regulations for all fish species; the 2014 recreational fishing regulations may be viewed at the link below:

Commercial
Statewide regulations; the 2014 commercial fishing regulations may be viewed at the link below:
http://www.wlf.louisiana.gov/fishing/commerical-regulations

DRAWDOWN HISTORY

No drawdowns conducted.

FISH KILLS / DISEASE HISTORY

There is no documentation of significant fish kills or disease outbreaks in Woolen Lake. A reported kill in 2007 was invalidated. The observed dead fish were attributed to commercial fishing bycatch.

CONTAMINANTS / POLLUTION

Water quality
No consumption advisories have been issued for Woolen Lake.

Water level
No water level records are kept from Woolen Lake.

BIOLOGICAL

Fish Sampling History
Sampling with the fish toxicant rotenone was the primary fisheries sampling method of LDWF from the 1960’s through the early 1990’s. It was discontinued due to negative public sentiment, potential health concerns of personnel, and availability of data from alternative sampling
Electrofishing is currently used as the primary largemouth bass sampling tool. Sampling with lead nets has become the primary crappie sampling tool for LDWF, though they have not been utilized in Woolen Lake. Gill netting is used to sample large fish, including bass and commercial species. The first sample with gill nets was conducted in March 2014. Table 2 describes historical sampling since 1964 and scheduled sampling through 2018.

Table 2. Summary of fisheries sampling conducted by LDWF on Woolen Lake.

<table>
<thead>
<tr>
<th>Year</th>
<th>Sampling Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965, 1971, 1984</td>
<td>Rotenone: two 1-acre samples. <em>Note: a rotenone sample consists of a 1-acre area blocked off with a net and the fish toxicant rotenone applied throughout, and fish collected for an hour after initial application and again the following morning</em></td>
<td></td>
</tr>
<tr>
<td>1989</td>
<td>Electrofishing – one 15 minute night sample during summer. <em>Note: electrofishing samples are defined as 15 minutes of time that electrical current is actually being applied into the water. Only largemouth bass and crappie are collected.</em></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>Electrofishing – two 15 minute night samples during fall.</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Electrofishing – two 15 minute daytime samples during fall. Electrofishing Forage – one 15 minute sample in conjunction with the standardized electrofishing sample. <em>Note: all species are collected during an electrofishing forage sample.</em></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Electrofishing – two 15 minute daytime samples during spring</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Electrofishing – two 15 minute daytime samples during spring</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>Electrofishing – three 15 minute daytime samples during summer</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>Gill Netting - two samples in March. *Note: a gill net sample consists of 4 gill nets of the following mesh sizes fished simultaneously in the same area: 2.5&quot;, 3.0&quot;, 3.5&quot;, and 4.0&quot;. Nets typically fished overnight for approx. 24 hrs. Electrofishing – three 15 minute daytime samples during summer</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>Lead Nets – two samples in fall. <em>Note: a lead net sample consists of running 2 separate nets in tandem at a set location for a period of approx. 48 hrs.</em></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>Gill Netting - two samples in January Electrofishing – three 15 minute daytime samples during spring and fall</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>Lead Nets – two samples in fall.</td>
<td></td>
</tr>
</tbody>
</table>

Lake records
No lake records compiled.

Stocking History
No LDWF fish stockings have been conducted in Woolen Lake.
Genetics
Genetic sampling has not been conducted on this waterbody.

Species profile
Table 3 lists the fish species documented from Woolen Lake.

Table 3. List of fish species documented from Woolen Lake, Louisiana

<table>
<thead>
<tr>
<th>Family</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gar Family, LEPISOSTEIDAE</td>
<td>Spotted gar, <em>Lepisosteus oculatus</em> (Winchell)</td>
</tr>
<tr>
<td></td>
<td>Longnose gar, <em>Lepisosteus osseus</em> (Linnaeus)</td>
</tr>
<tr>
<td></td>
<td>Shortnose gar, <em>Lepisosteus platostomus</em> Rafinesque</td>
</tr>
<tr>
<td>Bowfin Family, AMIIDAE</td>
<td>Bowfin, <em>Amia calva</em> Linnaeus</td>
</tr>
<tr>
<td>Herring Family, CLUPEIDAE</td>
<td>Gizzard shad, <em>Dorosoma cepedianum</em> (Lesueur)</td>
</tr>
<tr>
<td></td>
<td>Threadfin shad, <em>Dorosoma petenense</em> (Günther)</td>
</tr>
<tr>
<td>Minnow Family, CYPRINIDAE</td>
<td>Blacktail shiner, <em>Cyprinella venustus</em> (Girard)</td>
</tr>
<tr>
<td></td>
<td>Common Carp, <em>Cyprinus carpio</em> Linnaeus</td>
</tr>
<tr>
<td></td>
<td>Golden shiner, <em>Notemigonus crysoleucas</em> (Mitchill)</td>
</tr>
<tr>
<td></td>
<td>Weed shiner, <em>Notropis texanus</em> (Girard)</td>
</tr>
<tr>
<td>Pike and Pickerel Family, ESOCIDAE</td>
<td>Chain Pickerel, <em>Esox niger</em> (Lesueur)</td>
</tr>
<tr>
<td>Sucker Family, CATOSTOMIDAE</td>
<td>Lake chubsucker, <em>Erimyzon sucepta</em> (Lacépède)</td>
</tr>
<tr>
<td></td>
<td>Smallmouth buffalo, <em>Ictiobus bubalus</em> (Rafinesque)</td>
</tr>
<tr>
<td></td>
<td>Bigmouth buffalo, <em>Ictiobus cyprinellus</em> (Valenciennes)</td>
</tr>
<tr>
<td></td>
<td>Black buffalo, <em>Ictiobus niger</em> (Rafinesque)</td>
</tr>
<tr>
<td></td>
<td>Spotted sucker, <em>Minytrema melanops</em> (Rafinesque)</td>
</tr>
<tr>
<td>Freshwater Catfish Family, ICTALURIDAE</td>
<td>Yellow bullhead, <em>Ameiurus natalis</em> (Lesueur)</td>
</tr>
<tr>
<td></td>
<td>Blue catfish, <em>Ictalurus furcatus</em> (Lesueur)</td>
</tr>
<tr>
<td></td>
<td>Channel catfish, <em>Ictalurus punctatus</em> (Rafinesque)</td>
</tr>
<tr>
<td></td>
<td>Tadpole madtom, <em>Noturus gyrinus</em> (Mitchill)</td>
</tr>
<tr>
<td></td>
<td>Flathead catfish, <em>Pylodictis olivaris</em> (Rafinesque)</td>
</tr>
<tr>
<td>Pirate Perch Family, APHREDODERIDAE</td>
<td>Pirate perch, <em>Aphredoderus sayanus</em> (Gilliams)</td>
</tr>
<tr>
<td>Killifish Family, CYPRINODONTIDAE</td>
<td>Golden topminnow, <em>Fundulus chrysotus</em> (Günther)</td>
</tr>
<tr>
<td></td>
<td>Blackstripe topminnow, <em>Fundulus notatus</em> (Rafinesque)</td>
</tr>
<tr>
<td></td>
<td>Blackspotted topminnow, <em>Fundulus olivaceus</em> (Storer)</td>
</tr>
</tbody>
</table>
Livebearer Family, POECILIIDAE
Western mosquitofish, *Gambusia affinis* (Baird and Girard)

Silverside Family, Atherinidae
Brook silverside, *Labidesthes sicculus* (Cope)

Temperate Bass Family, Percichthyidae
White bass, *Morone chrysops* (Rafinesque)
Yellow bass, *Morone mississippiensis* Jordan and Eigenmann

Sunfish Family, Centrarchidae
Green sunfish, *Lepomis cyanellus* Rafinesque
Warmouth, *Lepomis gulosus* (Cuvier)
Orangespotted sunfish, *Lepomis humilis* (Girard)
Bluegill, *Lepomis macrochirus* (Rafinesque)
Longear sunfish, *Lepomis megalotis* (Rafinesque)
Redear sunfish, *Lepomis microlophus* (Günther)
Spotted sunfish, *Lepomis punctatus* (Valenciennes)
Spotted bass, *Micropterus punctulatus* (Rafinesque)
Northern largemouth bass, *Micropterus salmoides salmoides* (Lacépède)
White crappie, *Pomoxis annularis* Rafinesque
Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Drum Family, Sciaenidae
Freshwater drum, *Aplodinotus grunniens* Rafinesque

**Threatened/endangered/exotic species**
Silver carp, *Hypophthalmichthys molitrix*, have been observed leaping in Woolen Lake.
Bighead carp, *Hypophthalmichthys nobilis*, are also likely to occur in this lake, especially since they are present in great numbers in the Boeuf River, which occasionally backflows into the lake.

**CREEL**

**Historic Information/Type**
Recreational angler surveys have not been conducted on this impoundment.

**HYDROLOGICAL CHANGES**

In the 1960’s and 1970’s, irrigation of adjacent rice crops resulted in critically low water levels in late summer. Rice production in the immediate vicinity of Woolen Lake has declined in the past three decades, minimizing the annual de-watering for agricultural purposes.
WATER USE

Hunting
None

Skiing
No designated area, the middle section of the lake is suitable

Swimming
No designated swimming areas

Fishing
Fishing is popular, especially with boating anglers. There are no designated shoreline fishing areas or public fishing piers.

Irrigation
Primarily residential, limited agricultural

Highway Rights of Way
Parking on highway rights of way is prohibited by the Louisiana Department of Transportation and Development.