### General Information:
Grenada Reservoir is one of four flood control reservoirs (FCRs) in north Mississippi. Built by the US Army Corps of Engineers (COE) in 1954 on the Yalobusha River, it is the largest FCR and the state’s largest lake with a summer pool of 35,820 ac. Water levels follow an annual rule curve, but deviate from it due to local precipitation and COE spillway gate operations. The reservoir is lowered in fall to winter pool (9,800 ac); flood pool is 64,600 ac. The state’s largest lake is a popular destination for crappie and catfish anglers.

### Location/Contact:
3 miles northeast of Grenada, MS. COE office (662) 226-5911.

### Fishery Management:

### Purchase a Fishing License:
https://www.ms.gov/mdwfp/hunting_fishing/

### Amenities
- 10 concrete fee ramps.
- Bait shops in Grenada.

### Creel and Size Limits
The following apply to the reservoir, but not the spillway.

- Crappie: Must be over 12 inches. 15 crappie per day per angler; no more than 40 crappie per boat (3 or more anglers).
- Largemouth Bass: No length limit and 10 bass per day per angler.
- White and Yellow Bass: No limits.
- Bream: No length limit and 100 per day per angler.
- Catfish: No limits.

### Regulations
- No more than 25 jugs and no more than 25 yo-yos may be fished per person with no more than 2 hooks per device. Jugs and yo-yos must be tagged with the license holder’s MDWFP number or the angler’s name and address. Gear must be attended (in sight) during daylight hours.
- Grabbling season May 1 – July 15; only wooden structures allowed.
- No more than 4 poles may be fished per person; no more than 2 hooks or lures per pole.
- Spillway: Consult Outdoor Digest

### Fishing Tips

#### General
- Best fishing is usually in the spring and fall.
- Fish near deeper water if the water is falling; fish shallower if it is rising.

#### Crappie
- Target shoreline cover in spring in creek arms and coves. In summer and fall, troll for suspended fish in creek mouths and the main reservoir.

#### Largemouth Bass
- Target cover in coves in spring, points in summer, and tributaries in fall.

#### Bream
- Fish crickets or redwoms near cover.

#### Catfish
- Fish worms or cut bait in tributaries during runoff or over mudflats if no runoff.
<table>
<thead>
<tr>
<th>Species</th>
<th># of fish collected</th>
<th>% of sample</th>
<th>Average Length (inches)</th>
<th>Maximum Length (inches)</th>
<th>Average Weight (pounds)</th>
<th>Catch Rate – Adult fish (fish/mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluegill</td>
<td>369</td>
<td>32</td>
<td>5.4</td>
<td>7.9</td>
<td>0.1</td>
<td>77</td>
</tr>
<tr>
<td>Black Crappie</td>
<td>256</td>
<td>22</td>
<td>9.5</td>
<td>14.5</td>
<td>0.4</td>
<td>33</td>
</tr>
<tr>
<td>Gizzard Shad</td>
<td>200</td>
<td>17</td>
<td>10.2</td>
<td>17.9</td>
<td>0.3</td>
<td>7</td>
</tr>
<tr>
<td>Largemouth Bass</td>
<td>159</td>
<td>14</td>
<td>14.1</td>
<td>23.4</td>
<td>1.8</td>
<td>31</td>
</tr>
<tr>
<td>White Crappie</td>
<td>121</td>
<td>10</td>
<td>10.9</td>
<td>15.7</td>
<td>0.5</td>
<td>8</td>
</tr>
<tr>
<td>Channel Catfish</td>
<td>15</td>
<td>1</td>
<td>13.8</td>
<td>17.6</td>
<td>0.8</td>
<td>3</td>
</tr>
<tr>
<td>White Bass</td>
<td>11</td>
<td>1</td>
<td>12.6</td>
<td>16.7</td>
<td>1.1</td>
<td>2</td>
</tr>
<tr>
<td>Blue Catfish</td>
<td>10</td>
<td>1</td>
<td>22.5</td>
<td>28.8</td>
<td>4.1</td>
<td>2</td>
</tr>
<tr>
<td>Flathead Catfish</td>
<td>6</td>
<td>1</td>
<td>9.5</td>
<td>13.2</td>
<td>0.2</td>
<td>0</td>
</tr>
<tr>
<td>Threadfin Shad</td>
<td>6</td>
<td>1</td>
<td>3.3</td>
<td>3.7</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Redear Sunfish</td>
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<td>0</td>
<td>3.3</td>
<td>3.3</td>
<td>0.0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Above:** Fall 2019 electrofishing results. Abundant small fish measured in length groups are not included in average lengths and weights, only fish measured individually. Forage fish (Gizzard Shad, Bluegill) were numerous, but mostly small. Largemouth Bass, Bluegill, and Black Crappie spawn heavily in high water, as occurred in 2018 and 2019. Threadfin Shad likely came in from private waters; they usually winterkill within a few years.

![Fall Electrofishing Catch Rate](chart)

**Above:** Trends in fall electrofishing catch rates, adult fish. Bass abundance has increased due to higher water levels since 2015 (except for the 2017 drought). White Crappie numbers peaked in 2015 with the big 2013 year class. White Crappie were deeper than could be efficiently electrofished in 2019 due to the unusually rapid fall drawdown.
Above: Length distributions, fall electrofishing, 2019. Most bass were from the big 2016 year class. Numbers of smaller bass were less than expected with back-to-back flood years. Bluegill, Largemouth Bass, and Black Crappie usually spawn heavily in high water. Black Crappie were abundant on shallow cover (brush tops, stake beds, etc.); White Crappie were deeper and less susceptible to electrofishing. More Black than White Crappie were collected electrofishing.

Below: Growth rates for crappie, fall, 2019. Fish from 2018 and 2019 flood years were 75% of Black Crappie numbers. Not all fish were aged. Odd growth patterns were from low sample sizes of some year classes. Black Crappie grew slower than White Crappie, which is normal for the FCRs. It takes about a year longer for Black Crappie to grow over 12 inches. Few White Crappie older than Age 3+ were seen because of harvest. There were more Black Crappie older than Age 3+ because it takes them about a year longer to grow over 12 inches. Also, they tend to stay in cover while White Crappie suspend in open water where they are vulnerable to trolling.
Fish Harvest and Fishing Effort: Most anglers fished for crappie in 2019 (right, top). Crappie and catfish were 97.6% of harvest (right, bottom). Grenada crappie average the second largest of the FCRs. White Crappie (below, right) were over 99% of crappie kept.

Harvest and effort varied monthly (middle). Effort and harvest followed each other closely all year, indicating consistent seasonal fishing. Peak harvest and effort were in August as high water subsided. Anglers fished about 521,000 hr and kept about 605,000 lb of fish.

Harvest and effort rose 91% and 109%, respectively, from 2007-2019 (bottom). Harvest was low in 2011 due to low water and poor spawns from 2005 – 2007, plus the big 2009 crappie year class was too small to keep. Grenada’s reputation as the nation’s top trophy crappie lake has resulted in more fishing effort.

Anglers were 38% non-residents; out-of-pocket expenses (fuel, bait, etc.) were about $12 million.
Lake Characteristics: Grenada normally fluctuates 12 ft yearly following a “rule curve” based on seasonal rainfall patterns. For water levels (rule curve vs actual water level), see [http://mvk-wc.usace.army.mil/docs/bullet.txt](http://mvk-wc.usace.army.mil/docs/bullet.txt) for a table or [http://mvk-wc.usace.army.mil/plots/grenplot.png](http://mvk-wc.usace.army.mil/plots/grenplot.png) for a graph or [http://www.mvk-wc.usace.army.mil/resrep.htm](http://www.mvk-wc.usace.army.mil/resrep.htm) for both. Due to its shallowness, Grenada exceeds its emergency spillway more than the deeper FCRs (Sardis, Enid). Rapid fluctuations can make it challenging to find and pattern fish.

Fall drawdowns and droughts let moist soil vegetation colonize mudflats (below left) for fish habitat when water levels rise again. Flooding brings in nutrients and expands fish habitat. Aquatic vegetation is scarce due to fluctuating lake levels, but there are abundant shoreline trees and shrubs at higher water levels. The fluctuation zone (winter to summer pool, below right) has very little cover other than dead timber, some live trees and shrubs, and colonized vegetation.

Lake Characteristics: Grenada’s rule curve and rainfall sometimes result in low water during spring spawning season and/or limited vegetation colonization. However, the Grenada Reservoir COE sponsors a Habitat Day in winter when the water is low. Materials are placed in the fluctuation zone with the assistance of MDWFP and volunteers (right, top and bottom) to provide fish habitat when the water comes back up. Although beneficial, these artificial structures do not begin to replace the quantity or quality of habitat created by naturally colonized vegetation during low water periods or flooded during high water events.
**Spillway:** The Grenada Reservoir spillway is also a popular fishing destination, mostly for catfish and crappie by bank anglers. Crappie in the spillway are dependent on reservoir releases and are caught mostly in winter and early spring; catfish are more common in summer. A concrete ramp into the “old river run” below the dam provides anglers access. A new handicapped accessible pier (middle, left) was opened in 2017 where the spillway channel and old river run meet.

The Yalobusha River below the reservoir allows access into the spillway by many wide-ranging fishes, such as Asian carps (middle, right; Silver Carp, top. Bighead Carp, bottom) from the Mississippi River. Young Asian Carp resemble shad or minnows. Anglers collecting bait fish in the spillway must put them on ice or in a dry container to prevent the spread of these nuisance, non-native fishes to other waters. Uncommon species caught in the spillway may include Paddlefish, American Eel, Striped Bass, and Hybrid Striped Bass.

In 2019, Grenada Reservoir overflowed its emergency spillway for the first time since 1991 (bottom, left). Asian carps that inhabit the river below the dam were constantly jumping in the churning water at the bottom of the spillway (bottom, right) to get upstream. Fortunately so far, they have been unable to swim up the spillway tunnel or the emergency spillway overflow and invade the reservoir.