Late-Spring Electrofishing Survey Summary
Turtle-Flambeau Flowage, Iron County, 2010

The Mercer DNR Fisheries Management Team conducted electrofishing surveys on the Turtle-Flambeau Flowage (TFF) on May 18th and 20th, 2010, as part of the fisheries management baseline monitoring program. A total of 4.0 miles of shoreline were sampled (1.0 mile sub-sampled for panfish). Smallmouth bass was the primary target species; but data on the status of bluegill, black crappie, and yellow perch were also obtained. A fyke netting survey, conducted in late June, was also completed to better assess the status of the panfish community (e.g. black crappie and bluegill). The results from that fyke netting survey are presented in a separate survey summary. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society.

Smallmouth Bass

<table>
<thead>
<tr>
<th>Captured 30 per mile ≥ 7”</th>
<th>Quality Size ≥ 11”</th>
<th>93%</th>
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<tbody>
<tr>
<td>Preferred Size ≥ 14”</td>
<td>48%</td>
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<tr>
<td>Memorable Size ≥ 17”</td>
<td>14%</td>
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Bluegill

Captured 9 per mile ≥ 3”
Quality Size ≥ 6”  89%
Preferred Size ≥ 8”  11%

Black Crappie

Captured 13 per mile ≥ 5”
Quality Size ≥ 8”  77%
Preferred Size ≥ 10”  15%

Summary of Results

The shoreline reaches that were sampled during this survey are areas that have been determined to be primarily selected by smallmouth bass for spawning purposes. Therefore, relative abundances and catch statistics for species other than smallmouth bass (e.g. bluegill and black crappie) should not be used for comparative purposes with other waterbodies. This reasoning (i.e. not targeting panfish) partly explains the low numbers of black crappie and bluegill observed during this survey. In addition to low numbers of black crappie and bluegill, 10 rock bass and 2 yellow perch were captured during the survey.
Water levels during the 2010 electrofishing survey were noted to be more than 3 feet below the full-pool stage. In previous years, during this time period (late May), water levels have typically been noted to be either at the full-pool stage or slightly below. Therefore, the lower spring water levels may have reduced the amount, and perhaps the quality, of suitable spawning habitat for smallmouth bass. Water temperatures during the survey were in the mid 60s, which fall within the preferred temperature range for smallmouth bass spawning activity. Therefore, the survey was well-timed for purposes of obtaining a representative sample of all sizes of mature smallmouth in the near-shore spawning areas.

A total of 120 smallmouth bass were captured during the survey. Smallmouth bass ≥ 7 inches were captured at a rate of 30 per mile in 2010, compared with 26 per mile in 2009. Of all bass 7 inches and longer, 48% were over 14 inches and 14% were over 17 inches. The 2010 capture rate and size structure indices were within the targeted range for smallmouth bass objectives identified in the 2007 TFF Fishery Management Plan. The smallmouth bass population appears to be very healthy, with strong numbers and size of mature fish, as well as good numbers of young fish entering into the adult population. Anglers should find quality smallmouth fishing opportunities for both numbers and size. The minimum length limit on smallmouth bass is 15 inches with a daily bag limit of 2 fish.

This survey was not specifically designed to effectively sample the panfish community. However, the 2010 survey does provide some insight into the relative abundance and size structure of panfish species. Bluegill, black crappie, and yellow perch were captured at a relatively low rate in the 1.0 mile of sub-sampled shoreline where those species were collected, suggesting that the 10-bag aggregate limit of panfish (bluegill, crappie, pumpkinseed, and yellow perch) is appropriate. In addition to the reduced bag limit, there is a minimum length limit of 10 inches on crappie.

Lawrence Eslinger, Jim Cox, and Jim Zarzycki
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Edited and Approved by Dave Neuswanger
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