**Introduction and Survey Objectives**

In 2014, the Department of Natural Resources conducted a one night boomshocking survey of Korth Lake in order to provide insight and direction for the future fisheries management of this water body. Primary sampling objectives of this survey are to characterize species composition, relative abundance, and size structure. The following report is a brief summary of all activities conducted, general status of fish populations and future management options.

**Korth Lake Sampling Data**

- **Acres:** 16.1
- **Lake Type:** Sedge
- **Shoreline Miles:** 1.4
- **Maximum Depth:** 48 ft

**Survey Information**

<table>
<thead>
<tr>
<th>Site Location</th>
<th>Survey Date</th>
<th>Water Temp. (°F)</th>
<th>Target Species</th>
<th>Total Miles Shocked</th>
<th>No. of Stations</th>
<th>Gear</th>
<th>Dippers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Korth Lake</td>
<td>5/20/2014</td>
<td>62.3</td>
<td>All</td>
<td>1.42</td>
<td>3</td>
<td>Boomshocker</td>
<td>2</td>
</tr>
</tbody>
</table>

**Survey Method**

- Korth Lake was sampled according to spring electrofishing (SEII) protocols as outlined in the statewide lake assessment plan. The primary objective for this sampling period is to count and measure adult bass and panfish. Other gamefish may be sampled but are considered by-catch as part of this survey.

- The entire shoreline was sampled with a boomshocker. All fish captured were identified to species and measured for length. A subsample of fish were weighed and age structures collected for age and growth analysis.

- Fish metrics used to describe fish populations include proportional stock density, catch per effort, length frequency distribution, and mean age at length.

**Fish Metric Descriptions**

- **PSD, CPE, LFD and Growth**

**Proportional Stock Density (PSD)** is an index used to describe size structure of fish. It is calculated by dividing the number of quality size fish by the number of stock size fish for a given species. PSD values in the 30 to 50 percent range generally describe a balanced fish population.

**Catch per unit effort (CPUE)** is an index used to measure fish population relative abundance which simply refers to the number of fish captured per unit of distance or time. For lake surveys we typically quantify CPUE by the number and size of fish per mile of shoreline. CPUE indexes are compared to statewide data by percentiles. For example, if a CPUE is in the 90th percentile, it is higher than 90% of the other CPUEs in the state.

**Length frequency distribution (LFD)** is a graphical representation of the percentage of fish captured by one inch size intervals. Smaller fish (or younger age classes) may not always be represented in the length frequency due to different habitat usage or gear sampling limitations.

**Mean Age at Length** is an index used to assess fish growth. Growth structures (otoliths, spines, or scales) are collected from a specified length bin of interest (e.g. 7.0-7.5 inches for bluegill). Mean age from all samples is compared to statewide data.
Summary

- Korth Lake supports a diverse fish community comprised mainly of bluegill, black crappie, yellow perch, stocked rainbow trout, and northern pike. Our survey indicated fish populations were within acceptable ranges for both density and size.
- Largemouth bass populations were found in very low density.
- Northern pike were sampled at high levels and showed above average size with 48% of our catch greater than 8.0 inches. Bluegill and black crappie growth was average. Yellow perch were found at moderately high density but were comprised mainly of small fish (<5.0 inches).
- Other species sampled in low abundance included common carp (9), brown bullhead (1), yellow bullhead (4), and pumpkinseed (11).

Management Options

- Management options for Korth Lake should focus on preservation of habitat and water quality. Most of the shoreline is undeveloped and the littoral areas of Korth Lake are relatively narrow and confined which makes them particularly sensitive to disturbance.
- Korth Lake is currently managed as a two-story fishery with rainbow trout stocked annually. Our survey sampled trout throughout the entire length of shoreline. Stocking is recommended to maintain this fishery.
- No other management recommendations for other species at this time.