

# Lake Management Summary

**Lake Name:** Crab Orchard  
**Ownership:** Public

**County:** Williamson  
**Acreage:** 6965

**Water No:** 235

**Date of Report:** 12-19-07

**Fisheries Manager:** C. Bickers

**District No:** 22

## 1. Listing of the Sport Fish Regulations in Effect:

LMB: 16 inch (38 cm) min length limit, 3 per day creel

Striped, White,  
or Hybrid Striped Bass: 10 Total Creel - 3 Fish 17 inches (43 cm) or Longer Daily

## 2. Management Summary:

Adequate numbers of largemouth bass, bluegill, channel catfish, white bass, and white and black crappie were collected for analysis of the fish population in 2007, but no hybrid striped bass were included in the sample. Hybrid striped bass were probably not found because 1999 and 2001 are the only years significant numbers have been stocked since 1991, thus the remaining population consists of a few old individuals.

The proportion of largemouth bass larger than the 16-inch limit has been above 20% since 2004, and 2007 was no exception, indicating the existence of a quality population. Largemouth bass catch-per-unit effort was 109 fish per hour in 2007, a significant increase compared to 70 the previous year; both numbers easily exceeded the lake management goal of 60 bass per hour. Body condition of largemouth bass in Crab Orchard Lake also has remained excellent and was 102 in 2007 with a goal range of 90 to 110. Improvements in the Crab Orchard bass population in recent years can be at least partially attributed to a combination of more stringent harvest regulations, increased bass fingerling and threadfin shad stocking, habitat enhancement, and establishment of a spawning refuge area. The Crab Orchard National Wildlife Refuge is also limiting each bass club to one fish-off event per year to reduce angling pressure and angler conflicts.

The quality of Crab Orchard Lake bluegill exceeded the management goal for the fourth year in 2007, and bluegill body condition met the goal for the tenth year in a row, indicating another good forecast for bluegill anglers ; however the proportion of bluegill larger than six inches and seven inches decreased somewhat as compared to the previous year.

Crab Orchard Lake channel catfish quality and body condition, similar to previous years, were excellent, and 42% of the fish collected were larger than 22 inches in length.

Black crappie outnumbered white crappie in the fall 2007 Crab Orchard Lake survey by a factor of four. Black crappie abundance, length-based quality, and body condition all increased in 2007, and 76% of the fish collected were larger than eight inches long. White crappie abundance and body condition decreased slightly compared to the previous year, but length-based quality increased, and 66% of collected fish were larger than 10 inches.

Effectiveness of the Crab Orchard Lake Grassy Bay spawning refuge was assessed in June 2007 by electrofishing for 10 minutes within it's boundary and comparing results to those from a similar cove just east of the Grassy Bay mouth. Similar to the previous year, ten bass fingerlings were collected in the refuge in 2007 compared to one in the control location, supporting the premise that largemouth bass which are not harassed during the spawning season produce more young. Some of the spawning success documented in the refuge area during the past two springs may also have been attributable to installation of 50 artificial spawning structures in early spring 2006.

The following fish management activities have been ongoing and are planned for Crab Orchard Lake in 2008: Habitat will be augmented with deployment of brush-type fish attractors; aquatic vegetation will be planted to enhance habitat and reduce erosion; the extreme south end of Grassy Bay will remain a spawning refuge; and threadfin shad, largemouth bass, and hybrid striped bass will be stocked as available. In addition, the annual electrofishing survey will be conducted in October.