

## **Evaluation of Catch-and-Release Regulations at Wakeley Lake, 1987-97**

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*Abstract.*—Wakeley Lake has been managed with catch-and-release regulations for all species of fish, walk-in access, and other special rules since it passed from private to public ownership. Major goals were to maintain high-quality populations of largemouth bass *Micropterus salmoides*, northern pike *Esox lucius*, and sunfishes *Lepomis spp.*; maintain high-quality fisheries; and preserve a semi-wilderness setting. Surveys of fish populations were conducted prior to public access in 1986 and 1987, and after public access and special regulations were in effect in 1990 and 1997. Surveys of angling were conducted in 1987, 1990, and 1997, during the first, fourth, and eleventh years of public fishing. Trends in population and angling data indicated the largemouth bass population and fishery have been maintained or improved. Northern pike numbers and fishing quality diminished during the 1990s but the population has the same size structure. Bluegill *Lepomis macrochirus* and pumpkinseed *Lepomis gibbosus* populations and fisheries remained excellent. However, growth of largemouth bass, northern pike, and bluegill declined during the 1990s. Hooking mortality appeared to be very low. Extensive recycling of largemouth bass and northern pike was evidenced by frequency of tag returns and annual angling catches exceeding estimated spring populations by factors of 2-3 times. Anglers visiting the lake consistently expressed strong support for the regulations at Wakeley Lake and catch-and-release angling in general. These regulations have been very successful and should be continued at Wakeley Lake. The same management concepts should be extended to other lakes with equivalent opportunities.