



Lake Curtis Management Report

Popular Format

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Lake Curtis is a 91-acre Department owned lake in Stafford County. With exception of the dam site, all timber was left standing in the lake basin creating excellent fish habitat. Curtis Memorial Park (~ 500 acres) is a multi-use facility bordering the lake which offers tennis courts, a swimming pool, a golf course, and a picnic area. These accommodations make Lake Curtis truly an ideal destination for family activities, offering something for everyone. Beginning in 1978, Lake Curtis was initially stocked with largemouth bass, redear sunfish, bluegill, channel catfish, and tiger musky. Walleye, blue catfish, and northern pike were stocked in the 1980's. Currently, populations of largemouth bass, redear sunfish, black crappie, bluegill, and warmouth are maintained by natural reproduction. Channel catfish have been stocked annually since 1986 because of limited natural reproduction within this lake. Northern pike, walleye, and blue catfish are no longer stocked into this impoundment due to poor survival and low return to the creel.

Department fisheries biologists routinely sample the fishery with a variety of gears, including electrofishing, trap nets, and gill nets. Recent electrofishing samples were conducted in 1988, 1991, 1992, 1994, 1997, and 2000, which allows for comparisons over time. Proportional Stock Density (PSD) and Relative Stock Density (RSD) are numerical descriptors of length-frequency data that is used to describe the population dynamics of a fishery. PSD is calculated by the formula:

$$\text{PSD} = \# \text{ of fish } \geq \text{ min. quality length} / \# \text{ of fish } \geq \text{ min. stock length} \times 100$$

Sampling conducted in June of 2000 indicated that the largemouth bass fishery has remained relatively unchanged as compared to previous sample years. Catch per unit effort (CPUE) during our last sample was an impressive 82.1 bass/hour. PSD values were 33, 33, and 30 for samples collected in 2000, 1997, and 1994, respectively. Largemouth bass PSD (33) is slightly below the preferred 40-70 for a balanced population, but fishing is very good at this time. Bluegill PSD values of 23, 72, and 39 were calculated during the same period from 1994-2000. In most cases, balanced bluegill populations fall between 20 and 60, which means at this time the bluegill fishery at Lake Curtis is in balance. In 2000, bluegill CPUE was 55.5 fish/hour of electrofishing.

Relative Stock Density is the percentage of a specified size category or length in a sample. RSD is calculated by the formula:

$$\text{RSD} = \# \text{ of fish } \geq \text{ specified length} / \# \text{ of fish } \geq \text{ min stock length} \times 100$$

RSD-P was used to further evaluate the fish populations in Lake Curtis. RSD-P is the “relative stock density of preferred fish”, which is the proportion of bass in a population over eight inches that are also at least 15”. The Curtis bass fishery had an RSD-P of 14, which falls into the range of 10-40, which is generally indicative of a balanced quality fishery. RSD-P was also calculated for the bluegill fishery, which is the proportion of fish over three inches that are also 8” in length. The bluegill RSD-P for Lake Curtis was zero, which is below the desired range of 5-20. What this means for anglers is that though the bluegill population is considered in balance, very few 8” fish are available for harvest.

Other species collected in low numbers during routine sampling includes black crappie, redear sunfish, and warmouth. Anglers should expect to find good fishing for all species, with largemouth bass, bluegill, black crappie, channel catfish, and redear sunfish being the most sought after species.

Future fisheries management activities will include the continuation of channel catfish stocking on an annual basis at 25 fish per acre. Lake fertilization will also continue using liquid 10-34-0 fertilizer in order to increase the standing crop of fish within the lake. Beginning in 2002, biologists will initiate a black crappie study with the objective of assessing recruitment, growth, and mortality within this impoundment.

Lake Curtis has a large parking lot, boat ramp, courtesy pier, and several handicapped accessible fishing piers. Rental boats are available from the Stafford County Parks and Recreation Department at the adjacent Curtis Memorial Park. Anglers can reach Lake Curtis from I-95 and Fredericksburg by taking Rt. 17 north to Rt. 616

north. Follow Rt. 616 to Rt. 622, then turn left (west) to reach the boat ramp. Curtis Memorial Park can be reached by continuing on Rt. 622 and then turn left on Rt. 612. Additional information about the lake can be obtained by contacting the DGIF Regional Office in Fredericksburg (540-899-4169) or for information pertaining to Curtis Memorial Park, contact Stafford County Parks and Recreation Department (540-752-5632).