



## Beaverdam Creek Reservoir Management Report

### *Popular Report*

Federal Aid Project – F111R11

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Beaverdam Creek Reservoir is a 350-acre water supply impoundment located in eastern Loudon County that is owned and operated by the City of Fairfax. Access is currently limited at the reservoir's two primitive boat ramps due to security concerns post 9/11. The reservoir can be reached from Leesburg by heading south on Evergreen Mill Road. Then take a left onto Rt. 629 (Reservoir Road) and follow this road to the lake. Large boulders have been placed to restrict trailer access, though cartop boats/canoes are welcome for anglers willing to make the 100-yard hike to the water. Currently parking is limited to 5-6 vehicles. The other access point can be reached off of Belmont Ridge Road. Improvements or increased access to the reservoir are not likely at this facility due to jurisdictional issues. The City of Fairfax owns the reservoir, but will not develop property in Loudon County and Loudon County will not develop property that it does not own.

Beaverdam Creek Reservoir was impounded in 1972 and was shortly thereafter stocked with bluegill and redear sunfish. Largemouth bass and channel catfish were stocked in 1973. Additionally, channel catfish were stocked from 1974-1977, and in 1982, 1984, 1987, and 1990. Channel catfish stocking was discontinued in 1990 and the population is currently maintained by natural reproduction. Historical stockings included tiger musky, hybrid striped bass, striped bass, and blue catfish all of which were discontinued as a result of poor survival, low catch rates, or a change in management philosophies. The current fishery is maintained entirely by natural reproduction which includes bluegill, black crappie, common carp, largemouth bass, redear sunfish, white perch, and a limited population of smallmouth bass.

DGIF biologists sample the fishery approximately every three to five years (1990, 1994, and 2002). Most recently, an electrofishing survey was completed in May of 2002. Biologists employ numerical descriptors of length-frequency data such as Proportional Stock Density (PSD) and Relative Stock Density (RSD) when evaluating fish populations. Proportional Stock Density is calculated by dividing the number of fish  $\geq$  minimum quality length by the number of fish  $\geq$  minimum stock length x 100. Quality length is defined as the minimum size of fish most anglers like to catch. Stock length is the minimum length at which a fish provides recreational value. Relative Stock Density (RSD) is simply the percentage of any designated length group found within a population. RSD is calculated by dividing the number of fish  $\geq$  specified length by the number of fish  $\geq$  minimum stock length x 100.

The largemouth bass population continues to improve, with PSD values reaching an all time high (PSD 84) in 2002 over previous samples in 1990 and 1994 (PSD's 39, 71). Relative Stock Density values of "Preferred" fish (RSD-P) greater than 15 inches also increased to an astonishing 45 in 2002, which is close to double RSD-P values measured in 1990 and 1994 (18, 27). Beaverdam ranks 13<sup>th</sup> out of 19 impoundments in northern Virginia for catch-per-effort of "Preferred" largemouth bass. In addition to largemouth bass, three smallmouth bass were collected by DGIF biologists in 2002. Low capture rates for smallmouth bass in this impoundment are probably due to limited immigration of this primarily riverine species from tributaries flowing into this impoundment. Angler's can consider the smallmouth an added bonus, but should not expect to consistently catch these fish in the predominately largemouth bass fishery. Bass fishing at Beaverdam Creek Reservoir is currently managed under a 12 – 15 inch slot limit, which means that no bass may be harvested within this size range. Anglers are encouraged to harvest fish less than 12 inches or larger than 15 inches.

The bluegill population continues to exhibit very poor size structure, with all fish collected measuring less than 7 inches. Current bluegill PSD values fall well below the expected range for a balanced population (PSD 20-60). PSD values increased to 14 in 2002, which was higher than the 1994 value of 9. Hopefully, this upward trend for increasing PSD values will continue along with a corresponding improvement to the size structure of the bluegill fishery in this impoundment.

White perch were first documented in Beaverdam Creek Reservoir in 1987 with the collection of one specimen. Two distinct year classes were present by 1994, and the most recent sample in 2002 showed that the white perch fishery has expanded to become one of the more abundant fish species present. Currently, large numbers of white perch up to 8 inches are available to anglers. White perch are notorious for over-populating and stunting in small waters which is why anglers are encouraged to harvest this often underutilized but abundant resource. Small lures or natural baits such as red wigglers or bloodworms are good choices for individuals pursuing this scrappy fish.

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