



Hunting Run Reservoir Management Report

Popular Report

Federal Aid Project – F111R

December 2020

Robbie Willis, Assistant Fisheries Biologist

Virginia Department of Wildlife Resources

1320 Belman Road

Fredericksburg, VA 22401

Hunting Run Reservoir is a 420-acre water supply impoundment owned and operated by Spotsylvania County which was opened to public fishing in late 2007 and reached full pool in early 2009.

Access is limited to the county-maintained boat ramp and park near the reservoir's upper end at 9701 Elys Ford Road (Route 610) 2.1 miles north of Route 3. There is ample parking, a fishing pier and boat ramp. Anglers may launch canoes, jon boats and bass boats using electric motors only. Although there is currently no major concession; anglers may rent jon boat, electric motors and batteries. The lake hours are 6 A.M. to dusk on Saturdays & Sundays beginning late February through late March and then open each week Thursday through Sunday starting early April through mid October. Hunting Run is also open on Memorial Day, Labor Day and Columbus Day. The reservoir closes for the season beginning mid October.

Anglers need an access permit to fish on the reservoir. Season passes are only \$8 for anglers from Spotsylvania, and \$10 for those from Fredericksburg and Stafford. Daily passes are also available and cost \$3 for Spotsylvania residents, \$5 for Fredericksburg and Stafford citizens and \$7 for all others. Combination season access to both Ni and Hunting Run costs \$15 for Spotsylvania, \$18 for Fredericksburg and Stafford, and \$25 for all others. Senior citizens over age 62 and children under 16 have free access. Boat rentals are \$6 per hour with a minimum of three hours and can be rented for up to eight hours.

Hunting Run is usually sampled annually by electrofishing (EF) to get an accurate picture of the fisheries status. Electrofishing is an active sampling method used to determine abundance, density, and species composition of fish populations. Typically, community sampling is done in daylight. Historically, the reservoir has consistently been in the top ten NOVA district waters for catch rate of Largemouth Bass.

VDWR fisheries biologists have sampled the reservoir annually since an illegal introduction of Northern Snakehead in 2013 to monitor potential effects on the fish community. Most recently, an EF sample was conducted in April 2020. Biologists use shoreline EF to obtain estimates of population size structure and relative abundance. Abundance is usually described as a catch rate in number of fish per hour (CPUE, or Catch per Unit Effort). Biologists employ numerical descriptors of length-frequency data such as Proportional Size Distribution (PSD) and Proportional Size Distribution –Preferred (PSD-P) when evaluating fish populations. PSD 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 (12” for Largemouth Bass). Stock length is the minimum length at which a fish provides recreational value and/or is recruited to the fishery (8” for Largemouth Bass). PSD-P is the percentage of preferred length group found within a population. It is calculated by dividing the number of fish \geq preferred length by the number of fish \geq minimum stock length x 100. Preferred bass are those 15” or larger, while memorable bass are those 20” or larger.

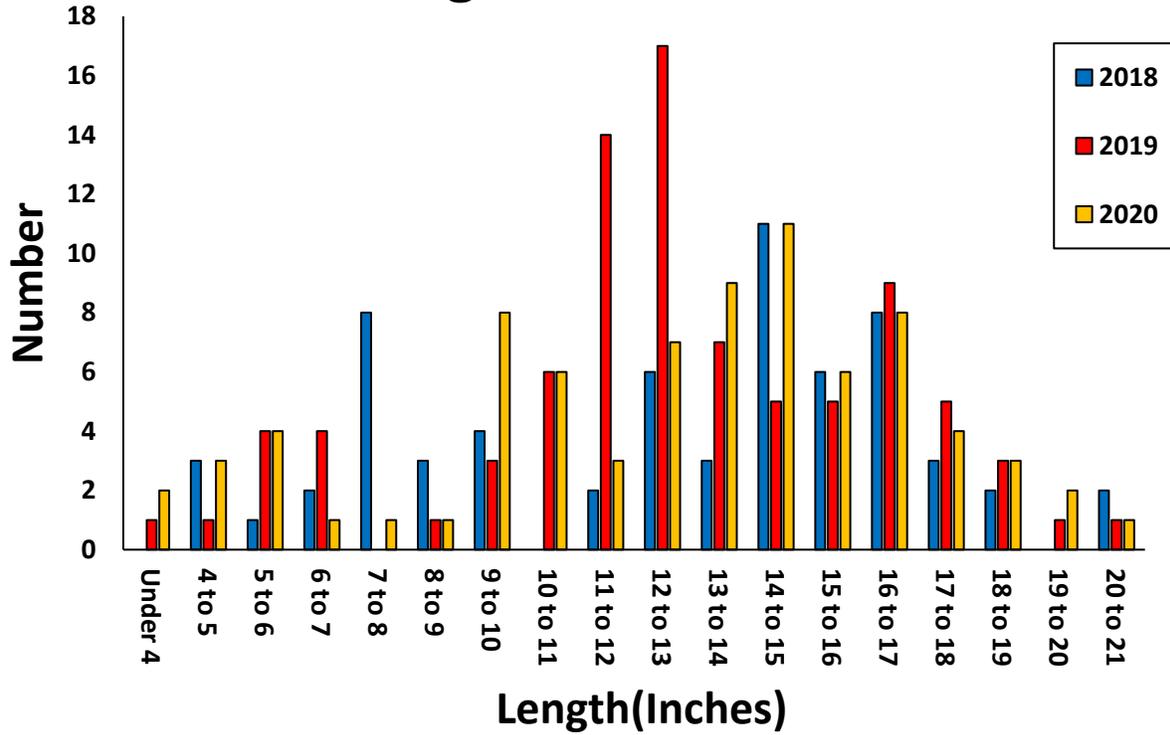
State standard regulations apply to the harvest of most game and nongame fish (e.g., catfish), but Largemouth Bass harvest has been regulated by a 14-22” protected slot limit. Anglers are required to immediately release any bass between 14 and 22” (inclusive), and can creel only one bass per day over 22” and up to four bass per day under 14”. Harvest of bass below the slot is beneficial to minimize stockpiling of small fish, increase growth and maintain a desirable size structure. In order to sustain Hunting Run as a trophy bass fishery, anglers are encouraged to keep bass under 14 inches, (especially those from 10-12”), and release bass over 22”. Anglers are also encouraged to keep Black Crappie (25 per day, no length limit) and Northern Snakeheads (no length or harvest limit).

Largemouth Bass

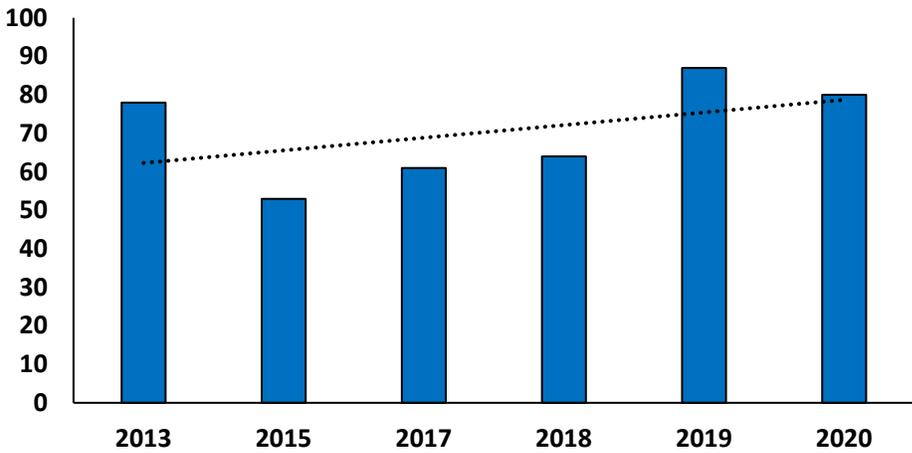
The population size structure of Largemouth Bass (LMB) in 2020 was slightly better than the previous sample in 2019. PSD increased to 75 from 73. A PSD of 40-70 is indicative of a balanced fish population. Proportional Size Distribution of preferred fish (PSD-P; ratio of adults greater than 15”) was better in 2020 (41) and indicative of a desirable size structure with a population trending towards larger individuals. Total catch per unit effort (CPUE) of LMB in 2019 (87 fish/hr) decreased slightly in 2020 to 80 fish/hr which is still good. CPUE of preferred size bass increased slightly from 26/hr (2019) to 28/hr in 2020. Since 2013, LMB catch rates have shown a gradual increasing trend (see CPUE graph). The collected bass were holding close to shoreline cover with some bass along the outside edges of flooded timber. Length distribution of collected bass ranged from 3 to 21”, with a large proportion of bass in the 11 to 17” range which suggests improvement in overall bass size structure.

This population is regarded as abundant with bass averaging 2-3 pounds and 6+ pound fish available. Largemouth Bass catch rate and size structure has fluctuated since the fishery’s creation, and the community became predator heavy in the mid-2000s. Forage was quickly reduced and as a result Largemouth Bass became skinnier, as Bluegill was the most utilized prey. Multiple attempts to introduce Gizzard Shad finally succeeded in recent years, and likely is one of the drivers of enhanced bass size structure. Hunting Run Reservoir has routinely been the recipient of surplus hatchery forage (e.g., Golden Shiners, Bluegill and Redear Sunfish) due to its predator-heavy community composition. Hunting Run has consistently ranked in the top 10 of the 17 impoundments in the NOVA district for CPUE of preferred bass and currently is ranked 9th.

Largemouth Bass

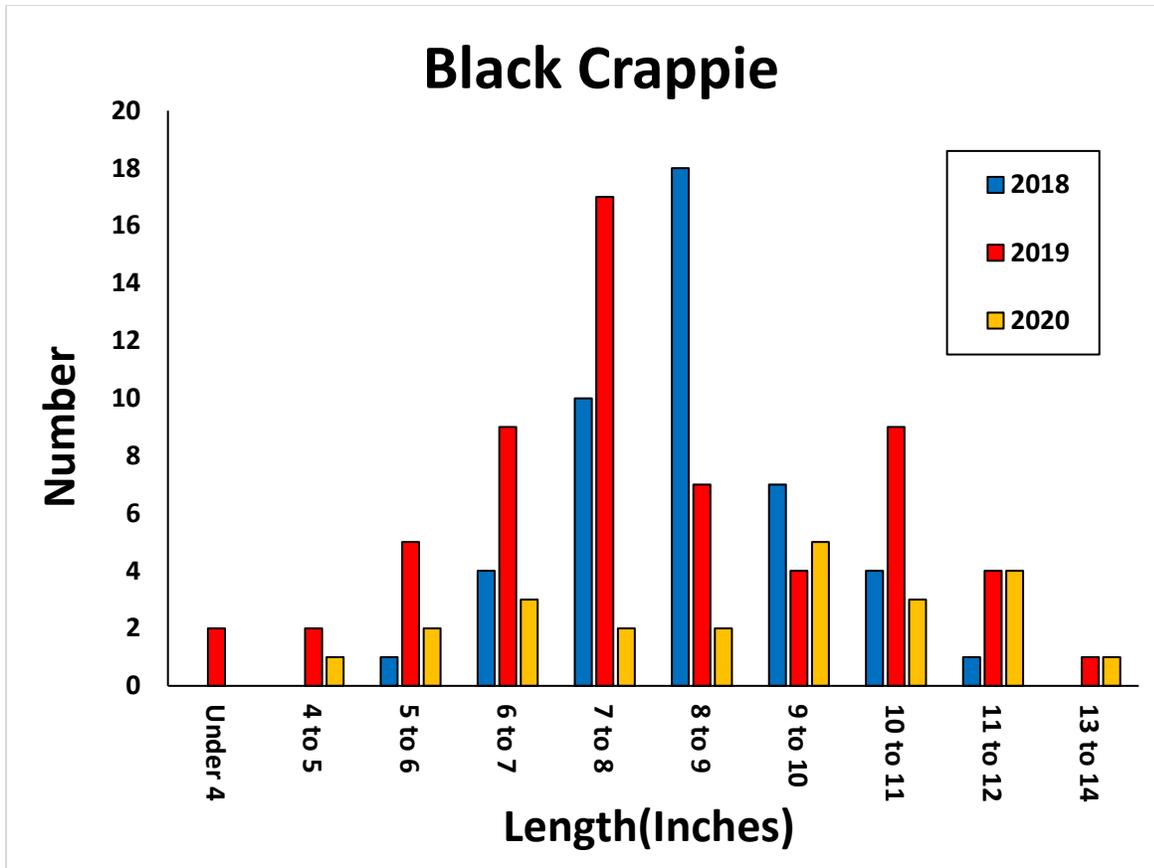


Largemouth Bass CPUE



Black Crappie

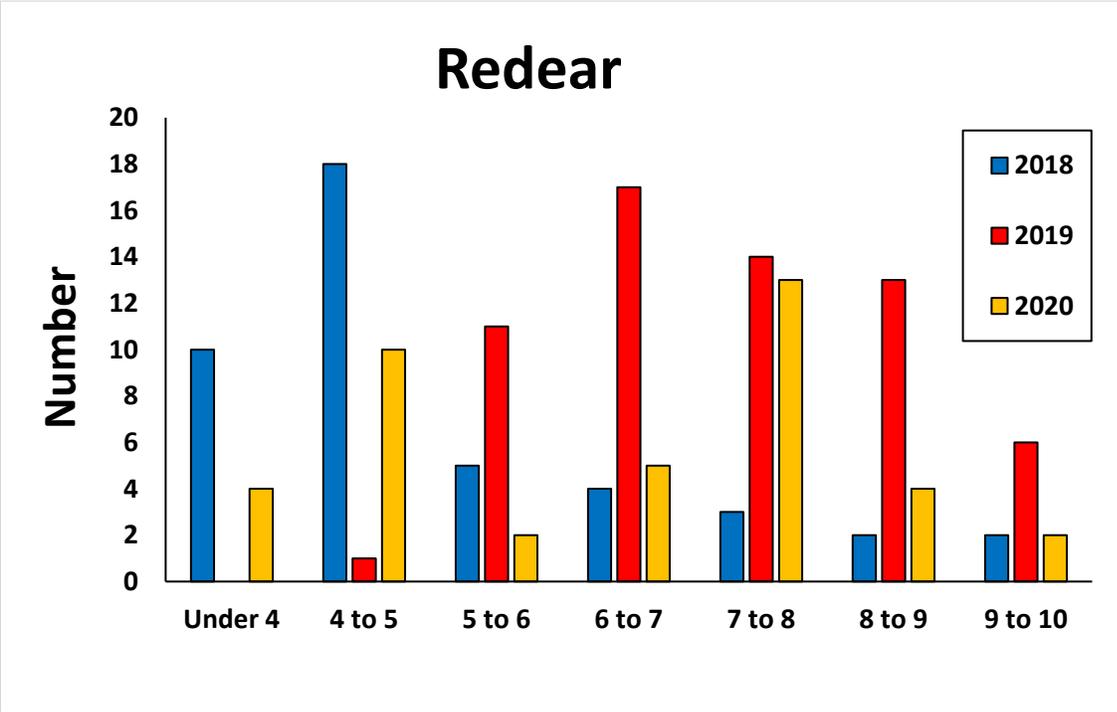
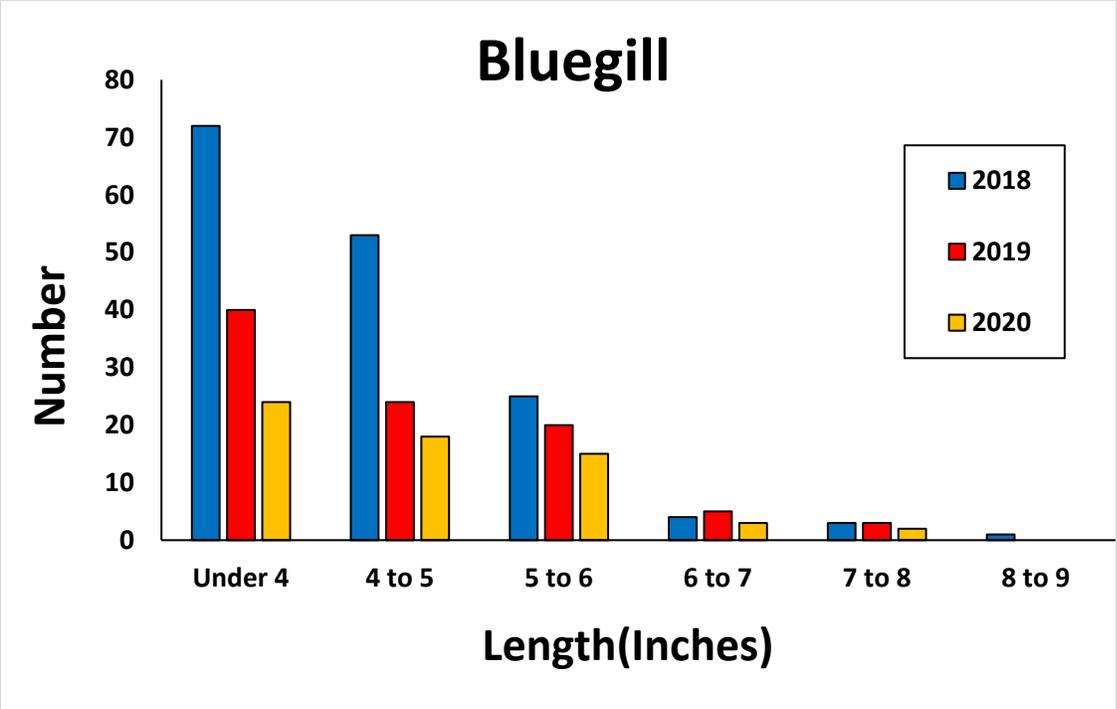
Hunting Run provides an adequate Black Crappie fishery. Black Crappie (BLC) electrofishing CPUE was lower in 2020 (23 fish/hr) compared to 2019 (60 fish/hr). Proportional Size Distribution (PSD) increased from 48 to 73 in 2020 (30-60 is balanced) suggesting a population made up of larger fish. The length distribution ranged from 4 to 13” with the majority being 9 to 12”. Crappie populations are known to fluctuate due to high annual variation in spawning success, and while not a positive sign for crappie anglers; reduced abundance of this species in this predator heavy community can be viewed beneficially. Crappie are predominately piscivorous and can compete with bass exacerbating poor growth and suboptimal size structure for both species especially in smaller, less productive lakes. Anglers are encouraged to harvest any crappie caught up to the 25-fish/day creel limit. Crappie are readily available lake-wide during spring to early summer.



Panfish

The 2020 electrofishing survey was successful in collecting 62 Bluegill per hour, a decrease from the 2019 survey (92 fish/hr). Bluegill (BLG) size distribution ranged from 2 to 7", with most fish in the 3 to 6" range. In 2020, Bluegill PSD increased to 18 from 16 in 2019 suggesting the population is nearly balanced (20-60 is balanced). The high abundance of predators has likely impacted the survival of juvenile and small adult Bluegill.

The Redear Sunfish (RDE) population also appears to be in fair shape. A total of 40 RDE per hour were collected in 2020 which was a decrease from the 2019 survey (62 fish/hr). The size distribution ranged from 2 to 10", with the majority of the fish in the 4 to 8" range. PSD decreased from 53 to 48, but remained within the balanced population range.



Additional Fish Species

Northern Snakehead (NSH) were illegally introduced into the reservoir in 2013. Since then, biologists annually sample snakehead in an effort to learn more about their ecology and biology, food habits, growth, and behavior. Biologists have been monitoring the fish community very closely to see if community level impacts are occurring as a result of the introduction. Snakeheads first appeared in annual sampling in 2017. Snakehead CPUE (3, 5, 2, and 2 fish/hr) since suggest a stable, if not declining trend. In a predator heavy community, additional effects from this illegal introduction will continue to be examined. All Northern Snakehead caught were removed, aged, and evaluated for food habits. The current fish community also includes populations of Channel Catfish, American Eel, Chain Pickerel, Warmouth, Green Sunfish, and Brown and Yellow Bullhead. Other species that didn't appear in recent surveys but are also likely still present include Golden Shiners and other sunfish and sucker species.

Hunting Run offers a variety of habitat to attract fish. Anglers should focus on the young timber left prior to inundation of the reservoir and the stick-up islands holding decent numbers of larger bass in spring. Shoreline habitat consists of Water Willow, downed timber and some spots of *Hydrilla*. There are several beaver lodges around the reservoir that hold large numbers of crappie and other sunfish. There are also a few older docks and pylons for fish to congregate near and on.

For more information on Hunting Run Reservoir, please contact:

Spotsylvania County Parks and Recreation Department
10910 Leavells Road
Fredericksburg, Virginia 22407
540-507-7529
<http://www.spotsylvania.va.us/content/15913/15925/16011/default.aspx>

Virginia Department of Wildlife Resources
1320 Belman Road
Fredericksburg, Virginia 22401
540-899-4169

