



Lake Brittle Management Report

Popular Report

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Lake Brittle (77 acres) is a DWR owned impoundment located in Fauquier County near the town of Warrenton. This lake was impounded in 1953 and became the first lake in Virginia built with Dingell-Johnson Funds which are tax dollars from the sale of fishing tackle (now referred to as the Sport Fish Restoration Act). Lake Brittle offers anglers a typical warm water fishery comprised of Largemouth Bass, Bluegill, Redear Sunfish, Black Crappie, and Channel Catfish. The lake is stocked annually with Saugeye and Channel Catfish, while the other species are self-sustaining. Saugeye, a cool water species, have historically done well in this small impoundment and offer anglers a unique opportunity to catch a traditionally northern species.

The lake is fertilized annually to stimulate the aquatic food chain. The added nutrients increase the lake's productivity and overall fish production but are used within the system without adding to nutrient loads downstream. In 2017, JMU was contracted to conduct a study on impoundments to evaluate nutrient budgets and assess the effectiveness of VDWR's fertilization program to ensure downstream impacts were negligible. This initiative was due in large part to the 2010 United States Environmental Protection Agency (EPA) Total Maximum Daily Load (TMDL) nutrient reduction strategy. Results confirmed that the VDWR impoundments fertilized were nutrient sinks with no export of nitrogen or phosphorous.

Lake Brittle is sampled annually by boat electrofishing to get an accurate picture of the fisheries status. Electrofishing (EF) is an active sampling method used to determine abundance, density, and species composition of fish populations. Saugeye sampling is done at night, as the species is primarily nocturnal and enters shallow water during early spring to spawn and feed. Typically, community sampling is done in daylight. Historically, Brittle has consistently been one of the top NOVA district waters for catch rate of Largemouth Bass.

VDWR fisheries biologists have sampled the fishery annually since the illegal introduction of Northern Snakehead in 2015 to monitor potential effects on the fish community. Most recently, an EF sample was conducted in May 2025. 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 Stock Density (PSD) and Relative Stock Density (RSD) now known as 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 \times 100. Quality length is defined as the minimum size

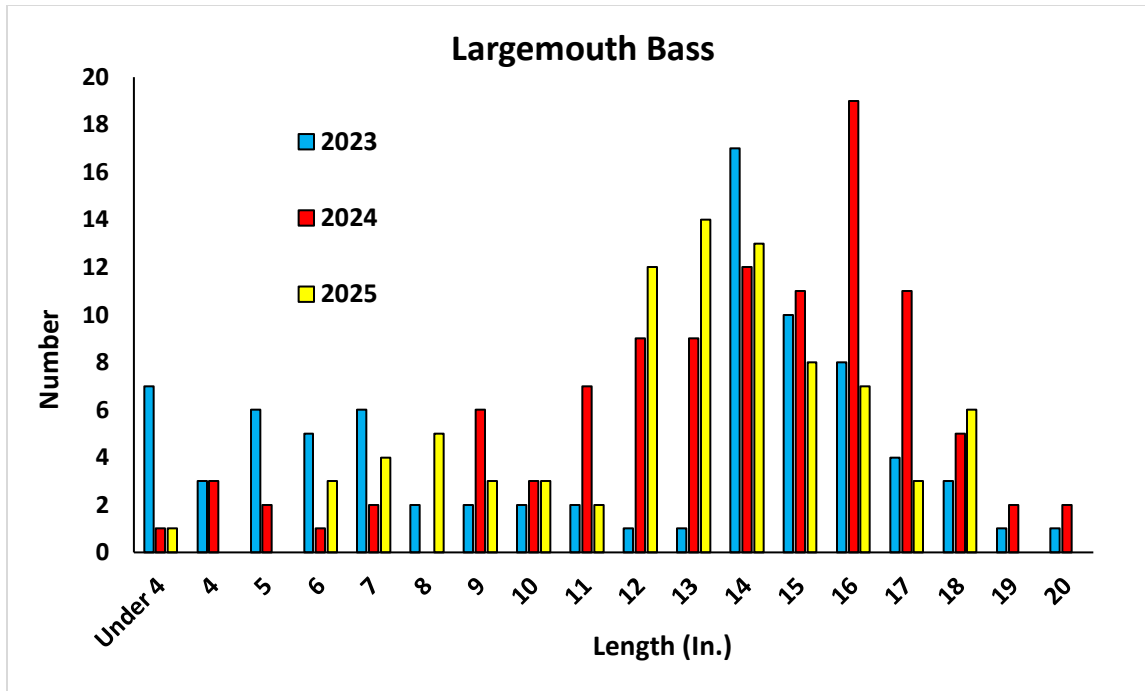
of fish most anglers like to catch (these are by national standards -for example, 12" for Largemouth Bass). Stock length is the minimum length at which a fish provides recreational value and/or is recruited to the fishery (8" for Largemouth Bass). PSD-P is the percentage of any designated length group found within a population. PSD-P is calculated by dividing the number of fish \geq specified length by the number of fish \geq minimum stock length x 100. Preferred bass are those 15" or larger, while memorable fish are those 20" or larger. Abundance is usually quantified using catch rate or number of fish captured per hour of electrofishing time (also known as CPUE or catch per unit effort). These indices and size groups are nationally accepted standards.

Largemouth Bass

The population size structure of Largemouth Bass (LMB) in 2025 was similar to the previous two samples with PSD values of 84(2023), 86(2024) and 84 (2025). A PSD value of 40-70 indicates a balanced fish population. Relative Size Distribution of preferred fish (PSD-P; ratio of adults greater than 15") decreased in 2025 (42) from previous years of 56 and 54 but is still indicative of a desirable size structure. Total catch per unit effort (CPUE) of LMB in 2025 (101 fish/hr) was very similar to 2024 (105 fish/hr), and higher than 2023 (81). CPUE of preferred size bass decreased in 2025 to 38/hr from 52 in 2024.

The LMB population of Lake Brittle is in excellent condition with bass averaging 2-3 pounds with 6 pound fish available. Due to the combination of fishing pressure and abundant forage. Largemouth Bass can be difficult to catch at Lake Brittle, as bass feed heavily upon Gizzard Shad and Bluegill. A good fish finder will allow you to find schools of baitfish and bass feeding on them. Anglers should try a variety of bait fish imitating lures such as crank baits (lip-less and diving) and soft plastic jerk baits. Lake Brittle has consistently ranked near the top of the list of 17 impoundments in the NOVA district for CPUE of preferred bass and currently is ranked 9th in the district.

Anglers may harvest five bass per day but are encouraged to practice catch and release on larger bass, as their value to the fishery can provide enjoyment for many others and contribute to the spawning stock.



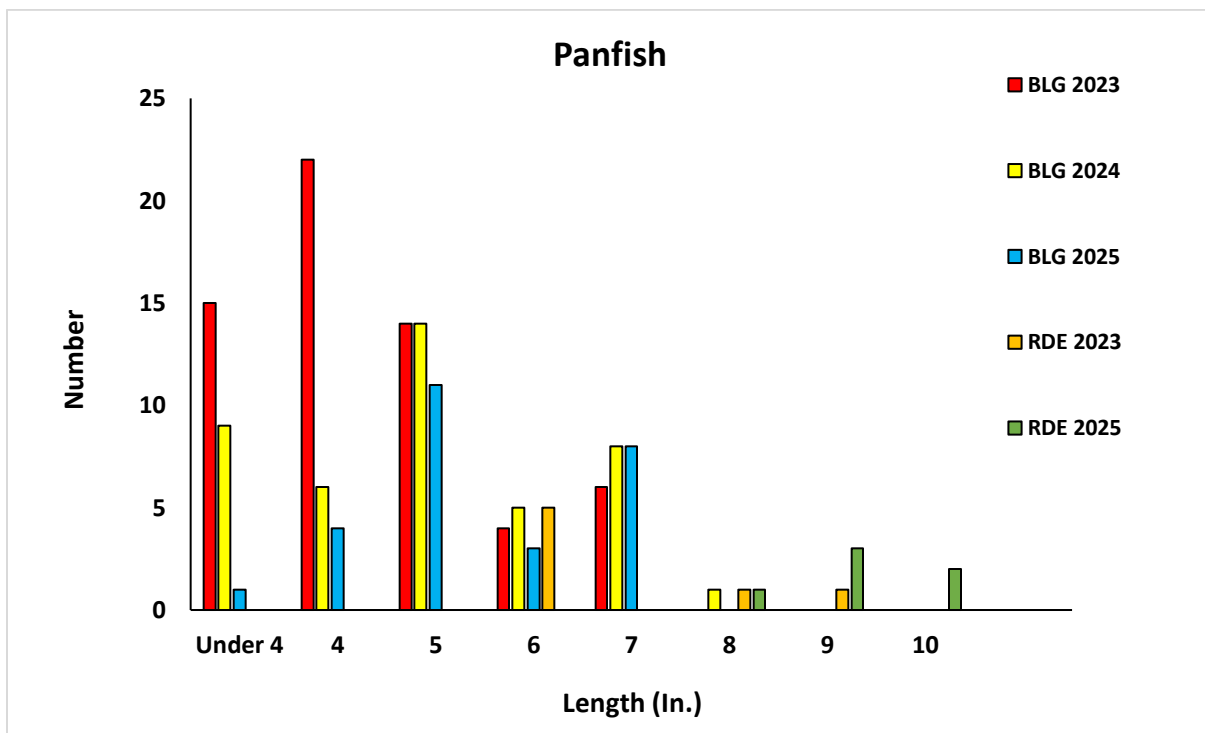
Black Crappie

Black Crappie (BLC) electrofishing CPUE has been very low over the last 3 samples (7, 23 and 2 fish/hr). The EF survey most likely missed the BLC as they were probably in deeper water based on higher water temps during the sample. Lake Brittle provides a marginal BLC fishery with most fish in the 6-8" range. Crappie populations are known to fluctuate due to high annual variation in spawning success. Lake Brittle is no exception, with small crappie (<8") dominating the population. Anglers are encouraged to harvest any crappie caught up to the 25-fish/day creel limit. Crappies are readily available lake-wide during spring to early summer and anglers should concentrate on fishing structure. Small jigs or minnows seem to work best on this prolific panfish.

Panfish

Bluegill (BLG) electrofishing PSD increased in 2025 (52) from 37 and 28 (2024, 2023) suggesting the population remains balanced. Panfish fisheries are typically considered balanced when PSD falls in the range of 20 – 60, however CPUE has decreased annually since 2023 from 61 fish/hr to 43 and 32. Redear Sunfish (RDE) CPUE has been very low (7 fish/hr) in 2023, (9 fish/hr) in 2024 and in 2025 (6 fish/hr). Based on historical data, both of these populations have been good at Brittle and will need to be closely monitored.

Ample opportunities exist for anglers to target panfish during spring/summer when fish move shallow to spawn and are easily accessible to bank or boat anglers. Natural baits such as worms or crickets tend to work best. There is no size limit on sunfish (Bluegill, Redear Sunfish, Warmouth, etc.) in Lake Brittle, and anglers may harvest 50 sunfish (combined) per day. Anglers are encouraged to harvest to thin the populations and allow for increased growth rates eventually resulting in larger fish. Opportunities also exist to catch Yellow Perch at Lake Brittle.



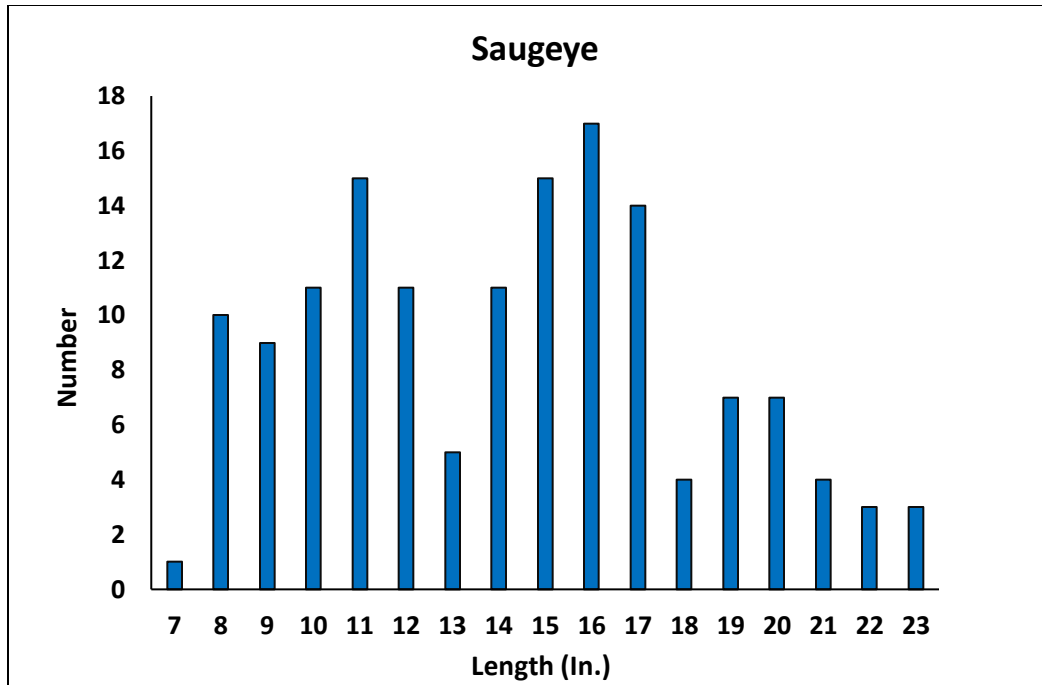
Channel Catfish

Lake Brittle provides a good Channel Catfish fishery and has historically received annual stockings of 20/acre since no natural reproduction occurs. However, due to DWR budget constraints, stockings will not occur in 2026 and possibly into the future. Anglers are encouraged to fish along the shore to find that perfect little hot spot. Eight Channel Catfish per day may be harvested with a 15-inch minimum. Anglers can catch them on a variety of baits including night crawlers, minnows, chicken livers, and cut bait. If bigger Channel Catfish are what you're after, then cut bait is the way to go.

Walleye/Saugeye

Walleye (WAE) were initially stocked in 1979 to provide a diversified fishery and are typically stocked annually at 100/acre to maintain the fishery. DWR has been stocking Saugeye (SAE) a hybrid between Sauger and Walleye solely into the lake as they seem to do better in DWR small impoundments. During March 2025, the *Sander spp.* population was sampled at night with boat electrofishing. A total of 147 were collected for an excellent catch rate of 90 fish/hr (the goal for small impoundments is ≥ 10 fish/hr). Spring daytime community sampling produced 2 large SAE. The population size structure is mainly comprised of larger fish up to 23". *Sander spp.* have been stocked in numerous lakes, as these excellent eating fish have become a prized game fish by many anglers. Lake Brittle has produced large Walleye over the years up to 7 pounds.

Anglers are encouraged to try trolling deep diving crank baits and spinner rigs off deep water break lines and points adjacent to deep water. Anglers could also try a variety of soft plastic grubs on jig heads and slowly bounce them over the bottom. Anglers should also remember that Lake Brittle stratifies during the summer and WAE/SAE along with most other fish stay above the thermocline (usually less than 10 feet) during this time. Serious anglers can try fishing Lake Brittle at night when they actively feed. There is a 5 per day 18" minimum size on *Sander spp.* in Lake Brittle.



Northern Snakehead

Northern Snakehead (NSH) were illegally introduced into Lake Brittle around 2015. 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 Lake Brittle fish community very closely to see if impacts are occurring as a result of the introduction. NSH CPUE during Sander *spp.* nighttime WAE/SAE surveys over the past 3 years was 4, 3 and 3 fish/hr. Snakehead CPUE over the last 3 years during daytime community sampling displayed a moderately increasing trend (CPUE of 5, 6 and 8 fish/hr.). All Northern Snakehead caught were removed from the lake, aged, and evaluated for food habits. Bluegill were the forage of choice as NSH are known opportunistic feeders and Bluegill are the most abundant species sampled.

Anglers targeting NSH should fish very shallow near heavy vegetation and/or structure using weedless lures such as frogs. Often these fish will give away their position as they rise to the surface to gulp air or roll and expose their back. During the spawning season you may spot their fry balls which adult snakeheads guard aggressively. Northern Snakehead are a very good eating fish, and there are numerous ways to prepare it. Anglers are encouraged to harvest these fish but can release them back into the lake after hook removal. It is illegal to possess a live

snakehead so the fish must be dead before being put into a cooler or livewell. Effective methods to kill the fish are removal of the head, gills arches or internal organs.

General regulations are posted at the parking area at Lake Brittle. Fishing is permitted 24 hours a day and a boat ramp is available for anglers to use free of charge. In addition to boat access, there is ample shoreline for bank anglers and a public fishing pier. Lake Brittle can be reached from Rt. 29 by turning east onto Rt. 600 near New Baltimore. Once on Rt. 600, turn right onto Rt. 793 and follow trailblazer signs to the lake.

For more information about Lake Brittle, please contact:

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