



Briery Creek Lake 2008

Located just seven miles south of Farmville Virginia, Briery Creek Lake is an 845-acre impoundment owned by the Virginia Department of Game and Inland Fisheries and is within the Briery Creek Wildlife Management Area. Briery Creek Lake was impounded in 1986 and was stocked with Florida strain largemouth bass, northern strain largemouth bass, bluegill, redear sunfish (shellcrackers), channel catfish, and crappie. Timber in the floodplain was left standing or was drumchopped resulting in an abundance of habitat for largemouth bass and crappie. Biologists hoped that the presence of the Florida strain largemouth bass and the complex habitat would produce a high quality largemouth bass fishery. The lake was opened to fishing on January 1, 1989 with an 18-inch minimum length limit and two fish/day creel limit on largemouth bass. Early production of largemouth bass was excellent and the regulation was changed to a 12 – 15 inch slot limit (5/day) on January 1, 1991 to allow anglers to harvest the abundant smaller bass. By the end of the 1990's, Briery Creek Lake became the premier trophy largemouth bass fishery in the state. Approximately 90 trophy largemouth bass are entered into the Angler Recognition Program each year and the state record was nearly broken again in April 2002 (16 pounds, 2 ounces). Anglers from across the state (and across the country) were coming to Briery each spring in search of a trophy largemouth bass. As the pressure on this fishery increased, the length limit was again changed to a 14-24 inch slot limit (no fish may be kept between 14 and 24 inches). The daily creel limit remained at 5 fish but only one fish can be longer than 24 inches.

The upper end of the slot limit is two inches larger than the minimum length for largemouth bass in Virginia's Angler Recognition Program. Anglers who catch fish that meet the minimum for this program (22 inches) but are within the protected slot may still participate in the ARP by having the fish certified by length (either verified by a witness or taking a photo of the fish next to a measuring tape).

Biologists sample Briery Creek Lake each spring with an electrofishing boat to monitor the fish populations (abundance, size structure, growth, survival). Largemouth bass are abundant, have a balanced size structure (meaning a good balance of young 'recruits' and adults), and grow fairly well. It takes largemouth bass about three years to reach 12 inches and about 8.5 years to reach 20 inches. The trophy slot limit has resulted in more 2-5 pound bass being caught; these fish should be the lakes future trophies. Although we collect several trophy largemouth bass each spring while electrofishing, it is not enough to truly monitor the quality of the trophy fishery.

Since 1999, biologists have also relied on creel survey data to provide information on the condition of the fish populations at the lake and it is here that we are able to monitor the trophy fishery. During creel surveys, anglers are interviewed as they leave the lake and asked things like how long they fished, what they caught, and what they harvested. It is also a great opportunity for biologists to get information on angler attitudes and opinions and determine what they would like to see done with the fishery. The ability to talk to several hundred anglers each spring has been instrumental in fisheries management at Briery Creek Lake. Here are some highlights from the creel surveys conducted from 1999-2005:

- Fishing pressure is highest in March, April and May.
- Most anglers (75%) at Briery Creek Lake fish for trophy largemouth bass.
- Catch rates for largemouth bass are highest in the summer but the success on trophy largemouth bass is highest in the spring.
- On average, a trophy largemouth bass is caught for every 200 hours of fishing effort in the spring. This estimate goes up slightly in the rest of the year.
- About 75% of the trophy largemouth bass are caught in the spring.
- Bluegill and redear sunfish catch rates were highest from late April through June. Anglers had success at this time of year fishing with live bait such as worms and crickets.
- Bluegill and redear sunfish in the 8 – 11 inch range are common making Briery Creek Lake one of the better sunfish lakes in Southside Virginia.
- The crappie fishery is good but success is seasonal. Crappie tend to be caught mostly in the spring although some anglers can find them in the trees during the summer. Several 2-pound fish are caught each year but the average size of crappie harvested is about 11 inches.
- Anglers from across Virginia fish at Briery Creek Lake. Additionally, anglers from 10-15 states come to fish Briery Creek Lake each year.

Briery Creek Lake is often compared to nearby Sandy River Reservoir. In 2003 and 2004, summer sampling showed that Sandy River Reservoir had significantly higher abundances of young largemouth bass than Briery. From 2005-2007, the VDGIF funded a research project to Virginia Tech to determine if this trend has continued, study factors that influence spawning success at the two lakes (and why they are different) and recommend management activities that assures that Briery Creek Lake continues to be Virginia's premier trophy largemouth bass fishery.

Results of this study indicated that Briery Creek Lake has continued to experience lower largemouth bass recruitment compared to Sandy River Reservoir and that factors occurring in June are the cause. Predation on age-0 largemouth bass, potential competition with bluegill and significantly lower protein digestion appear to be the main contributors to reductions in recruitment. The main predator on young largemouth bass was older largemouth bass.

The primary food source for age-0 largemouth bass in June is zooplankton. Researchers at Virginia Tech suggest that the high abundance of aquatic vegetation in Briery Creek Lake may be tying up nutrients that are normally used by phytoplankton (the major food source of zooplankton). Therefore reductions in aquatic vegetation may stimulate increases in phytoplankton; additionally, Briery Creek Lake could be fertilized to boost primary productivity (and ultimately fish production). Accordingly, the VDGIF stocked triploid (sterile) grass carp (N

= 4,900) in May 2008 to reduce plant coverage (estimated at 40%). Grass carp generally take 2-3 years to be effective in controlling macrophytes.

If grass carp are effective at reducing plant coverage, biologists will determine if fertilization is necessary. One thing that this will mean for anglers in the future is reduced water clarity (current 6' visibility reduced to 2'). High water clarity generally means lower productivity, not necessarily the formula for sustaining a trophy fishery. Conversely, if water depth clarity is 18-24", primary productivity (the bottom of the food chain) is higher and fish production (abundance and growth) is significantly greater. Also, anglers will likely spend more time fishing the abundant tree coverage in Briery rather than vegetation.

The VDGIF has also begun stocking largemouth bass on an experimental basis. Approximately 21,000 fingerlings (about 2 inches) were stocked in May. The genetic makeup of these fish was half Florida largemouth bass and half northern largemouth bass (F₁). These fish are known to anglers and pondowners in the south as Tiger bass. Each of these fish were marked with OTC so biologists can measure the contribution of stocked fish and compare length distributions. Evaluating these stockings is paramount to the future of Briery Creek Lake because stocking largemouth bass in older, established fisheries has had mixed results.

One factor that does not appear to be causing the poor recruitment in Briery Creek Lake is angling. In 2006 and 2007, two coves were closed to fishing and researchers examined age-0 largemouth bass in these two coves and compared them to two reference coves where fishing was allowed. No differences in abundance of age-0 largemouth bass were found, indicating that fishing during the spawn and catching fish "off the bed" was not impacting the fishery.

The VDGIF is committed to maintaining Briery Creek Lake as the states premier trophy largemouth bass fishery. Although the lake has experienced lower recruitment the past several years, angler catch rates continue to be excellent (0.4 fish per hour). The research commitment to try and determine factors associated with reduced recruitment was key to the future of the fishery. Finally, recommendations put forth by researchers have already been put into place so Briery Creek Lake will continue to be one of Virginia's most popular largemouth bass destinations.

Access at Briery Creek Lake is excellent. There are two boat launch facilities (Routes 790 and 701) that have concrete ramps, courtesy piers, restroom facilities, and paved parking. A handicapped fishing pier is located at the end of Route 790 (near the dam). Gas motors up to 10 HP are permitted. The lake closes one-hour before sunrise and closes one-hour after sunset.