

## Freshwater Fisheries Monthly Report – June 2021

### Stock Assessment

Completed a mark-recapture electrofishing survey on Broadford Lake to monitor and assess the lake's bass population. Along with bass, all other gamefish species were collected during the survey to assess the overall fish population of the lake. Fish collected and observed while sampling included: black crappie, bluegill, brown bullhead, chain pickerel, common carp, hybrid striped bass, largemouth bass, pumpkinseed, rock bass, and smallmouth bass.



*Hybrid striped bass collected during sampling efforts on Broadford Lake. Photo by John Mullican*

**Deep Creek Walleye** - Continued to prepare and read otoliths removed from walleye that were collected from Deep Creek Lake. Data collected from otoliths will help to determine productivity, growth, mortality, length at age, and age at maturity.

**North Branch Potomac River Trout** - completed a mark-recapture electrofishing survey of the trout population within the Zero Creel Trout Fishing Area between Westernport and the Black Oak Fishery Management Area access. Local fishing guides assisted by marking trout prior to the survey to increase estimate precision. Eighty six percent of the trout collected were rainbow trout and 14 percent were brown trout. Overall, the fishery was found to have a desirable size structure with multiple sizes, including trophy size fish, represented.



*Brown trout collected from the North Branch Potomac River.*

**Annual Trout Surveys** - Trout survey work was initiated in the Catoclin Region in central Maryland. The following sites were sampled in June

- Fishing Creek (right fork): 87 brook trout
- Fishing Creek (right fork headwaters): 55 brook trout
- Hunting Creek (Elbow Pool): 68 brown trout and 7 rainbow trout
- Little Hunting Creek: 24 brown trout and 1 brook trout

**Qualitative Electrofishing Surveys:**

- **Jabez Branch** - Conducted six qualitative electrofishing surveys in the Jabez Branch watershed hoping to detect brook trout. Surveys were conducted in the left and right forks of Jabez Branch, the right and left fork (Holladay Branch) of the right fork of Jabez Branch, Hog Farm Road tributary and a headwater section of Jabez Branch along Jabez Run Road off Route 3. No brook trout were found in any of the sites surveyed.
- **Baisman Run** - Conducted qualitative electrofishing surveys in Baisman Run over a two-day period as part of a brook trout management study.
- **Gunpowder Fall Tributary** - Conducted qualitative electrofishing surveys in an unnamed tributary to Gunpowder Falls that is one of the last tributaries to the tailwater with brook trout.

**Federal Aid Report** - Started Jabez Branch federal aid report for sampling year July 1, 2020 through June 30, 2021.

**Loch Raven Reservoir** - Conducted electrofishing surveys at 12 sites on Loch Raven Reservoir during the nights of June 7 and 8. Loch Raven Reservoir was surveyed in the fall of 2020 but because of heavy aquatic vegetation in most sites, it took three nights and 18 sites to get the required 150 stock size and larger largemouth bass for statistical analysis. Freshwater Fisheries' updated standard operating procedure for impoundment sampling recommends surveying in spring on reservoirs known to have heavy vegetative growth before aquatic vegetation becomes too dense. Despite a series of 90-degree days that pushed the reservoir temperatures higher than the recommended water temperature for surveying, good densities of targeted species were collected. A total of 188 stock size and larger largemouth bass were collected in the 12 sites during the June survey as well as 172 stock size and larger sunfish species and 96 stock size and larger yellow perch in four sites. One northern snakehead measuring 20.4 inches (51.8 cm) was collected and removed from the reservoir. Three northern snakeheads were removed in the fall of 2020.

**Conowingo Reservoir** - The annual electrofishing survey of Conowingo Reservoir to assess the black bass population was completed in June. Twenty-three sites were electrofished for 600 seconds each. As in past years, smallmouth and largemouth bass catch rates were good, indicating robust black bass populations. The fishing should remain good for both species. Higher densities of flathead catfish were encountered in 2021 than in previous years. One individual collected was far too long for the measuring board and too heavy for the scale! Panfish densities appeared to be much lower than in previous years. The Pennsylvania Fish and Boat Commission also conducted a similar survey on their portion of the reservoir in June and reported similar findings.



*Quality largemouth and smallmouth bass from Conowingo Reservoir*



*A monster-sized flathead catfish from Conowingo Reservoir*

## **Habitat and Water Quality**

**Environmental Review** - Provided aquatic resource information for the following environmental review projects:

- The potential construction of a private pond at a residence in Accident Maryland. General guidelines were set in place for the application process, and it was determined that an on-site meeting was needed to discuss the feasibility of building the pond and protecting the existing aquatic resources.
- An application submitted by Maryland Department of the Environment (MDE) - Abandoned Mine Land Division for a stream channel alignment project to take place on Sand Spring Run in Frostburg Maryland. Comments were submitted to reduce floodplain and aquatic resource impacts, as well as recommendations for restoration after project completion.
- An application for the installation of a 1.2 mile recreational trail that is to travel from the Fork Run Recreational Area to the Adventure Sports Center located in McHenry Maryland. Three crossings are proposed spanning stream/ floodplain areas along the trail. Recommendations provided requested that the existing hydrology should not be altered and actions must be taken to protect trout species that inhabit Fork Run and Hoyes Run downstream of the crossing locations.
- A stream channel restoration project for a residence in Grantsville Maryland to remove debris from a silted in channel in order to help prevent flooding of adjacent wetlands and agriculture fields. Time of year restrictions along with strict sediment and erosion control measures were recommended to protect the tributary and Puzzley Run further downstream.

- An application for the installation of a patio and pool at a residence in Friendsville Maryland. With the project being located in the floodplain of Bear Creek, sediment and erosion control were a priority.

**Project Open Space** - Provided comments on Project Open Space properties. Properties included potential additions to Dan's Mountain Wildlife Management Area, South Mountain Battlefield, heritage bat caves, Wills Mountain State Park, and Green Ridge State Forest.

**Stream Restoration** - Completed a site visit to evaluate the results of a large stream restoration project in the Gunpowder River above Prettyboy Reservoir.

**Temperature Loggers:**

- Deployed temperature loggers at thirteen sites in the Youghiogheny River from Swallow Falls to Sang Run to monitor the coldwater releases from the Deep Creek Lake Hydroelectric Station. Brookfield Power Company, Maryland Department of the Environment, and Freshwater Fisheries department monitor the coldwater releases made during the critical summer-time period. These releases are critical to maintain the quality catch-and-release trout fishery in the Youghiogheny River between Hoyes and Sang Run.
- Deployed continuous temperature loggers at 18 sites in Frederick and Washington counties to monitor water temperature during the summer index period (June-August). This work will assist with stream use class re-designation and coldwater conservation efforts.

**Stocking and Population Management**

**Trout** - Assisted Albert Powell Hatchery with stocking rainbow trout fingerlings into Little Seneca Creek and Gunpowder Falls tailwater. The North Branch Potomac River zero creel area received cutthroat trout fingerlings provided by Albert Powell Trout Hatchery.

**Channel Catfish** - Regional Freshwater Fisheries staff assisted hatchery personnel with channel catfish and rodeo stocking this month.

**Stocking Permits** - Processed and issued 14 stocking permits during June.

**Outreach**

Provided customer service information for inquiries regarding:

- Tips for fishing Deep Creek Lake.
- Fishing license information.
- Casselman River fishing regulation for the start of the put-and-take timeframe of June 16 to September 30.
- Tips for a private landowner on improving water quality for a small pond.
- Purchasing park passes for Deep Creek Lake and Broadford Lake.
- Trout fishing opportunities in Garrett County.
- Smallmouth bass fishing opportunities in Washington County.
- Trout stocking and fishing on the North Branch Potomac River.

**Tagged fish for Youth Fishing** - Assisted hatchery personnel with tagging catfish for the Battie Mixon fishing rodeo. Hatchery crews provided hybrid bluegills along with channel catfish for the event. Thirty fish were tagged for the event for participants to receive special prizes.

**Youth Fishing Day** - Assisted with a youth fishing event at the Patuxent Research Refuge. The youth (along with parents) were required to visit various stations to learn about basic fishing techniques and safety, casting, fish identification, habitat, and fish handling prior to fishing. The event was limited due to COVID restrictions; however, most of the 16 youth were first time anglers and many fish were caught throughout the morning.



**Master Naturalist** - Provided an Aquatic Ecosystems/Freshwater Fish class for the Black by Nature Master Naturalist Program at BLISS Meadows in Baltimore. The class was instructed on the different aquatic ecosystems in Maryland, the threats to these ecosystems and the importance of resource protection. A presentation on the fishes of Maryland, with focus on fish found in their region, was also provided. Participants were then able to practice identifying fish from most of the 23 families of freshwater fishes found in Maryland.



*Master Naturalists learn to key out fish.*

## **Angler Access**

**Fishery Management Areas** - Monitored and maintained the Evitts Creek, Black Oak, and McCoole fishery management areas. Trash cleanup, tree debris removal, and road maintenance have been completed to keep access areas open for use.

**Signage** - Checked and replaced regulation signs as needed at different management areas throughout Garrett County. Priority areas were the zero creel brook trout area in the Savage River watershed to inform vacationers in the area, and the delayed harvest areas to cover the regulation change effective June 16.

## **Invasive Species**

**Snakehead Derby** - Staff coordinated, helped plan, and participated with the Snakes on the Dundee snakehead derby held at Dundee Marina (Gunpowder River) in collaboration with Gunpowder State Park. A total of 142 anglers participated in the derby and 18 snakeheads were caught. The largest was 9.14 pounds.



*Left to right: Participants get a brief intro to fishing, snakehead weigh-in, filleting demo along with some tasting.*

Staff submitted a proposal to the Aquatic Nuisance Species Task Force to receive funding for invasive species work.

**Conowingo Dam Fish Lift** - Fish lift operations at Conowingo Dam were concluded on June 5 due to rising temperatures. In late May to early June the numbers of northern snakehead collected in the lift dropped sharply. Unfortunately, numbers of flathead catfish collected in the lift increased rapidly during this time. Over the entire 2021 season, 952 northern snakehead and 1,098 flathead catfish were removed from the Susquehanna River. Zero blue catfish were collected in the west lift in 2021. This was the first year of this cooperative approach to remove invasive species from the Susquehanna River, but it was undoubtedly a success. Several thousand pounds of fish were processed by J.J. McDonnell & Co., Inc. and donated to Marylanders in need. These fish were also utilized by the scientific community to gather important data on growth rates, genetics, fecundity, and diet. The information will allow managers to better understand impacts to the ecosystem. Staff completed dissections of snakeheads collected from the Conowingo Dam fish lift; data are available on a google spreadsheet shared with U.S. Fish and Wildlife Service.



*Removing and weighing the ovaries of a gravid female northern snakehead.*



*Recording stomach contents from a northern snakehead. This one ate a small American eel.*

## **Brook Trout Program**

Completed initial modeling looking at relationships of land use, habitat, and temperature on brook trout occupancy and distribution. Preliminary results suggest that streams above 270 meters in elevation have a high probability of supporting brook trout. Streams below 270 meters require increased forest cover (greater than 65 percent) to support brook trout. Habitat quality owed to riffle diversity and available cover were also important predictors. Paired air and water temperature data suggested that streams with lower slope relationships (i.e. more groundwater influence) had a greater chance of supporting brook trout. A joint meeting will be held to review the results followed by a formal write up. This work will help inform the Brook Trout Program's reintroduction and restoration efforts.

Participated in a climate resiliency workshop which discussed concerns regarding rising temperatures as it pertains to brook trout in the Chesapeake Bay watershed. Staff provided input on habitat connectivity issues in Maryland and coldwater resource concerns.

Participated with Maryland Biological Stream Survey (MBSS) and Maryland Forest Service in a stream buffer and temperature monitoring project. Maryland Forest Service has over 30 sites of restored stream buffers with before and after temperature monitoring. Staff provided input and offered assistance in helping analyze the temperature data. Understanding how reforesting streamside buffers improves temperature regimes will help inform restoration planning for coldwater resources, particularly brook trout.

Participated in quarterly Eastern Brook Trout Joint Venture Steering Committee meeting to conduct regular business. Specifically, National Fish Habitat Partnership (NFHP) funding levels, project grants, and outreach materials were discussed. As part of a roundtable discussion, staff shared recent accomplishments by the department's Freshwater Fisheries Program.

Completed a review of the Brook Trout Fishery Management Plan and progress toward the goals established by the Fishery Management Plan.

Assisted with collection and marking and the subsequent recapture of marked trout in the North Branch of the Potomac River in an effort to estimate the population of trout in the tailwater.

Commented on project applications and provided comments on behalf of the brook trout resources impacted by the proposals.

Prepared a presentation for the Nemascolin Chapter of Trout Unlimited to discuss the Brook Trout Program and give an update on management and conservation efforts made over the past year.

## **Tidal Bass Program**

Attended several weekend tournaments to assist with permit compliance and observe the quality of bass brought to weigh-scales. Events included the Fishing League Worldwide (FLW) College/High School series, the American Bass Anglers, and Major League Fishing.

Provided supplies for a youth tournament held by Fishers of Men on St. Mary's Lake. Supplies supported the development of a catch-photo-release style tournament.

Provided information on fishing regulations and fishing locations to fishing mentors participating in the U.S. Fish and Wildlife Services First Cast program.

Helped coordinate the logistics of the Bass Pro Shops' U.S. Open Bass Tournament, which will be held at National Harbor (MD) on July 17.

Worked with Department of Natural Resources Office of Communications and National Guide Service to create new video content that updates information on livewell maintenance during bass tournaments; ideas for video content were provided by the Black Bass Advisory Committee.



Worked with designated members of Sport Fisheries Advisory Commission and Black Bass Advisory Committee to identify five new potential members from the 57 applications for the Black Bass Advisory Committee.