

## **Freshwater Fisheries Monthly Report – June 2024**

### **Freshwater Fisheries - Stock Assessment**

**Deep Creek Lake** - Western Region I staff conducted electrofishing on Deep Creek Lake as part of the annual monitoring and management efforts. In addition to regular monitoring, bluegill, smallmouth bass, and yellow perch were collected in order to determine age and growth and fish health assessment. Further, specific locations were sampled as part of an ongoing mercury study with the University of Maryland.

**North Branch Potomac River** – Western Region I staff conducted the third year of a PIT tagging project on the catch-and-release, all tackle management area on the North Branch of the Potomac River. The purpose of the tagging study is to determine age, growth, and mortality of wild and juvenile stocked rainbow and brown trout as well as estimate the population size.

**Frederick County Trout Streams** - Trout surveys have started in Frederick County in streams along the Catoctin Ridge. Adult brook trout densities have looked good in long-term monitoring stations. Unfortunately, juvenile brook trout densities have been quite low. The extreme low-flow conditions last fall were probably a major factor in reduced juvenile recruitment.

**Smallmouth Bass Seine Surveys** - Smallmouth bass juvenile seine surveys were conducted on the Monocacy River in Frederick County and Conococheague Creek in Washington County. Shoreline seine surveys are used to monitor the number of new bass entering the population. Both river systems showed successful spawns with juvenile recruitment numbers close to their long-term median values. Juvenile smallmouth bass surveys will start in the upper Potomac River mainstem in July.

**Largemouth Bass Aging** - Southern Region biologists collected scale samples from 105 largemouth bass from the tidal Potomac River. Otoliths from tournament mortalities have been used for aging, but tournament caught fish are biased towards the biggest and best. It has been more than 20 years since any aging has been done that includes all sizes.

**Conowingo Reservoir** - Eastern Region staff completed the annual electrofishing survey of the Conowingo Reservoir. A window of calm weather provided good conditions to sample. With the assistance of Central Region personnel, two boats were able to operate at increased efficiency. Unicorn Lake Hatchery staff provided assistance during the survey. Once again, Conowingo's black bass population appears healthy. Quality-sized smallmouth and largemouth bass were in abundance. Good densities of juvenile smallmouth bass were encountered as well. Statistical analysis will be completed in the upcoming months. eDNA was also collected from all sites to test for the presence of Alabama bass DNA in the Conowingo Reservoir black bass population.



*Largemouth and smallmouth bass sampled in Conowingo Reservoir*

## **Freshwater Fisheries - Habitat and Water Quality**

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

- Existing Use Determination drafts for two streams that will be redesignated from Use Class I, warmwater to Use Class III, coldwater by Maryland Department of the Environment. The redesignations were justified with data collected and submitted by Fishing and Boating Services to the Maryland Department of the Environment. Comments were submitted to support and strengthen the reclass justifications. In addition, Existing Use Determination drafts are currently under review for the redesignation or existing use determination of three other streams and rivers. The justifications for two of the changes are supported by Fishing and Boating Services data. These reclassifications and existing use determinations will improve regulatory protection for the thermal regime of streams and rivers that currently support coldwater resources.

**Habitat** - Regional staff collected side scan sonar recordings at the locations sampled on Deep Creek Lake and Broadford Lake. The recordings are used to map habitat where fish sampling occurred.

## **Freshwater Fisheries - Stocking and Population Management**



*Stocking fingerling rainbow trout in the North Branch Potomac River.*

**Stocking Permits** – Staff reviewed one pond stocking permit in Garrett County.

**Trout Stocking** – Staff attended a coldwater production meeting to discuss trout production needs and potential changes.

**Rainbow Trout** – Approximately 47,000 juvenile rainbow trout reared

at the Albert Powell Trout Hatchery were stocked into the North Branch Potomac River catch-and-return all tackle management area.

### **Freshwater Fisheries - Outreach**

**Maryland Envirothon** – Provided fish identification training and provided fish samples for test day at the aquatic station for the Maryland Envirothon held at Mount St. Mary’s University in Frederick County. Sixteen county teams competed and Harford County took first place and will represent Maryland at the National Envirothon Competition in New York at the end of July.



*Envirothon test day- keying out a several fish species*

**Greenbrier Es Mi Parque** – Provided the Mobile First Catch Center Fishing Trailer for the Es Mi Parque event at Greenbrier State Park in Washington County. Several families took advantage of the loaner rods and enjoyed fishing in the lake.



*Mobile First Catch Center Fishing Trailer*

**Cushwa Basin Youth Fishing Rodeo** – Provided the Mobile First Catch Fishing Trailer at the Cushwa Basin Youth Fishing Rodeo. Over 125 youth fished the rodeo; the hybrid sunfish that were stocked prior to the event was the most common species caught. There were several first time anglers attending and they borrowed fishing tackle during the event.





*Cushwa Basin Youth Fishing Rodeo*

**Tagged Catfish** - Blue catfish that were tagged and released in the Patuxent River in 2021 are still being caught by some anglers. Two anglers reported their catch, hoping to find out when and where the fish were tagged. The anglers were sent a letter of appreciation from Fishing and Boating Services and were given all the pertinent information that was collected at the time of capture.

### **Freshwater Fisheries - Fish Health**

Freshwater Fisheries is collaborating with the Virginia Department of Wildlife Resources (DWR) and the US Geological Survey (USGS) on a juvenile smallmouth bass health study. Juvenile smallmouth bass produced from the Virginia DWR Front Royal Hatchery



*Juvenile smallmouth bass cage being deployed in the upper Potomac River.*

were placed in a sealed cage in the upper Potomac River to monitor survival over a one-month period. Virginia DWR is doing a similar cage study in the Shenandoah River. Weekly water grab samples and continuous temperature monitoring is also being conducted at the cage locations to look at a potential range of water chemistry components.

## **Freshwater Fisheries - Angler Access**

### **Fishery Management Areas (FMAs):**

- Held a workday at Hughesville Pond, the only Fishery Management Area in the Southern Region. The day involved cleaning up the grounds, cutting trees and brush along the shoreline, and mechanically removing both filamentous algae and duckweed. The workday may have ended up being a workweek if not for the generous help of folks from the Maryland Park Service and their summer staff from both the Veteran Conservation Corps and Maryland Conservation Corps. Their contribution of both tools and manpower made the work possible.
- Continue to perform routine checks and maintenance at the McCooles, Black Oak and Evitts Creek FMAs.

## **Freshwater Fisheries - Invasive Fishes Program**

Invasive Fish Program staff attended the third annual “Snakes on the Dundee III” snakehead derby held at Gunpowder State Park on June 8, 2024. The event was organized with the Maryland Park Service, US Fish and Wildlife Service, Maryland Fish and Wildlife Conservation Office, and the department. Approximately 180 people attended the primarily outreach event and enjoyed bowfishing and angling demos, filet demonstrations, fish prints, and other activities. Four adult snakeheads were caught and the tournament winner was a 12.7 pound fish.



*How to filet a snakehead demo (left) and one of the four snakeheads caught for the day (right).*

Invasive Fish Program staff and Eastern Region staff hosted high school students enrolled in a program sponsored by The Chesapeake Bay Foundation at Susquehanna State Park.



Students were able to get hands-on experience on dissection, otolith removal, and filet techniques. Staff also gave a tour of the electrofishing boat and provided assistance during the presentation.



*Invasive Fishes Program Manager presents information at Susquehanna River State Park.*

Member selections for the newly formed Invasive Catfish Advisory Committee (ICAC) have been made and successful applicants are currently being informed. The committee, which aims to help inform the department on issues related to invasive blue and flathead catfish, hopes to hold its first meeting in early-July 2024.

Statewide Operations staff met with the DC Department of Energy and Environment to discuss a future co-hosted fishing derby targeting invasive fishes in the tidal Potomac River in June 2025.

Staff from the Invasive Fishes Program, Southern Region, and USGS Eastern Ecological Science Center collaborated to sample blue catfish from the tidal Patuxent River to measure levels and distribution of contaminants in tissues, particularly PFAS/PFOS.

### **Freshwater Fisheries - Coldwater Program**

Qualitative surveys were conducted in over 15 streams to determine coldwater resource occupancy and potential or to monitor low density populations. New brook trout populations were documented in the Youghiogheny River watershed and in the Casselman River watershed. The surveys also provided current information for several low density populations that have not been assessed in recent years. Finally, qualitative surveys were conducted in a brook trout reintroduction stream, though preliminary efforts have not documented the establishment of a sustained population.

North Branch Potomac River benthic samples collected at four stations were processed for coldwater obligate benthic macroinvertebrates. The next step will include identification and counting of all processed specimens. In addition, benthic samples collected in four streams to determine coldwater potential were identified and counted. The results of sample analysis will be used to determine if the sampled streams can support coldwater fisheries resources.

Participated in Chesapeake Bay Trust's annual Pooled Monitoring Meeting and several related meetings to discuss on-going water quality research projects. The Pooled Monitoring Meeting provides a forum for researchers and regulatory agencies to present trust fund supported projects and their influence on policy making. Fishing and Boating Services staff reviewed and commented on projects that investigated the impacts of stormwater best management practices on surface water temperatures.

Coordinated the purchase and delivery of limestone sand to Wolf Den Run State Park. Wolfden Run supports brook trout but occupiable habitat is limited by impacts from acid mine drainage. The limestone sand is used to treat the stream and neutralize the pH, which increases habitat availability and expands brook trout occupancy. This project will continue annually.

Attended the Eastern Brook Trout Joint Venture Steering Committee quarterly meeting. Several on-going projects discussed at the meeting include a collaborative effort to analyze Maryland's coldwater dataset to determine the importance of environmental covariates on brook trout population density. The logistics of the release of a range wide eastern brook trout occupancy map by Eastern Brook Trout Joint Venture were also discussed.

### **Freshwater Fisheries - Tidal Bass Program**

Worked with Major League Fishing tournament to identify tagged largemouth bass to monitor the fishery as part of an inter-cooperative agency monitoring effort, as well as collect mortalities for aging and diet analysis.

Moved largemouth bass juveniles from Joseph Manning Hatchery to Wheelabrator Technologies, Inc. for the purpose of grow-out and later stocking (in October) to Gunpowder River and/or Bush River.

Supported the Paralyzed Veterans of America tournament at Smallwood State Park by assisting with trailering boats, providing aerators for live wells to improve the recovery of bass, holding largemouth bass following the tournament, and releasing bass to the cove at Smallwood State Park.

### **Freshwater Fisheries - Other**

**Training** - Biologists from the Southern Region attended the Maryland Biological Stream Survey (MBSS) summer training workshop at Bowie State University to reinforce identification skills of crayfish and finfish.