Freshwater Fisheries Monthly Report – May 2022

Freshwater Fisheries - Stock Assessment

North Branch Potomac River - Worked collaboratively with the United States Geological Survey to collect and test 20 smallmouth bass for various pathogens and diseases from the North Branch of the Potomac River near Cumberland. This work is being conducted to assess the overall health of the smallmouth bass population in the river and collect accurate growth data from otoliths.

USGS staff processing smallmouth bass for health evaluation.

Collecting smallmouth bass by electrofishing.

Lake Habeeb - Conducted fish community surveys on Lake Habeeb (Rocky Gap). Largemouth bass were the most abundant gamefish, followed by smallmouth bass. Yellow perch were the most abundant panfish, closely followed by bluegill. Populations of redear sunfish and black crappie are also present. The size structure of the largemouth bass population is very desirable for anglers. More detailed data analyses are underway and a full report will be made available through the federal Sportfish and Restoration Report.

Deep Creek Lake - Conducted surveys on Deep Creek Lake. Staff collected gamefish/panfish data at 20 sites randomly selected from around the lake. Smallmouth bass were the most abundant gamefish collected and yellow perch were the most abundant panfish. Formal data analyses are being performed and a detailed report will be made available through the federal Sportfish Restoration report.

Savage River Reservoir - Conducted fish community surveys on Savage River Reservoir. Staff collected gamefish/panfish data at 10 sites randomly distributed around the lake. Largemouth and smallmouth bass were the most abundant gamefish in the lake and multiple memorable size class largemouth bass were collected (up to 23 inches). The highlight of the evening was a visit from retired fisheries biologist, Alan Heft, who assisted with the survey as a volunteer (*photo below*).

Trophy Largemouth Bass Collected from Savage Reservoir.

Radio Tagged Trout - Worked collaboratively with the Interstate Commission on the Potomac River Basin (ICPRB) to collect and radio tag 25 adult rainbow trout with radio transmitter tags. The ICPRB staff will track these fish at regular intervals in order to determine seasonal movement patterns of trout in the Trout Catch and Return management area between

Westernport and Pinto, Maryland. Data will support efforts to best manage the water resources available as well as inform ongoing fisheries management efforts.

Inserting radio tags

Flow Workshop - Participated in an Interstate Commission on the Potomac River Basin (ICPRB) sponsored Potomac River Environmental Flow Workshop. Staff presented fisheries monitoring data in the lower section of the upper Potomac River. The importance of river flow was discussed in relation to the overall aquatic health of the system and potential adjustments to minimum flow standards that are currently in place at Little Falls.

Brunswick Pond - Installed a new pond aerator for Brunswick Pond in Frederick County. Over the past several summers, the pond has had issues with excessive floating vegetation. The aerator should help keep a large area of water open for anglers. Thanks to the Rosemont Lions Club for assistance with the aerator installation.

Brunswick Pond aerator in operation

Cunningham Fall Lake - Conducted gamefish electrofishing surveys on Cunningham Falls Lake in Frederick County. The 42-acre impoundment is located in Cunningham Falls State Park. The surveys showed good densities of largemouth bass and sunfish (bluegill, redear). Catch rates for largemouth bass >12 inches averaged 132 fish/hour. The largest bass collected measured just under 22 inches and weighed 6.8 pounds. The mark-recapture population estimate for

largemouth bass >8 inches was around 1,500 fish. The sunfish size distribution also looked good with 40 percent of fish collected being >8 inches. A small number of black crappie were also collected in the surveys.

Largemouth bass from Cunningham Falls Lake

Wheatley Lake - Conducted a 3-day mark and recapture study on Wheatley Lake in Charles County. Wheatley Lake's bass population has remained unbalanced with numerous sub stock largemouth bass since sampling began in the 1980s. Water chemistry plays a part in fish condition in the lake, but there has also been an increase in abundance of several fish species that may further impact the bass population. Data analysis is ongoing.

Entered data from spring hoop net survey at Triadelphia Lake into GIFS (Freshwater Fisheries database) and summarized the output for reporting in the next federal Sportfish and Restoration Report.

Freshwater Fisheries - Habitat and Water Quality

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

- New construction and stormwater management facilities at Fallston Village Shopping Center in Harford County. The proposed project would include new bioretention ponds and the conversion of an existing dry retention pond to a wet pond. The project is located adjacent to Wildcat Branch, a Use Class III (nontidal, coldwater) tributary to the Little Gunpowder Falls. The department expressed concern and opposed the addition of a wet pond in the watershed. Staff met with project planners to discuss these concerns and recommended alternative stormwater management features. Project planners changed the wet pond design to a hybrid submerged gravel wetland with a pool and resubmitted for review. The updated plans are currently being reviewed.
- Central Region staff attended Environmental Review site visits on McGill Run and Jones Falls in Baltimore County. Both of these projects have naturally reproducing brown trout within the proposed restoration areas.

- An application submitted by Maryland Department of Transportation, State Highway Administration for the replacement of a bridge that spans Buffalo Run in Friendsville Maryland. Recommendations were provided to protect coldwater resources in a brook trout watershed with time of year restrictions, minimal impact with strict sediment and erosion control, precautions while working with concrete, and recommendations to prevent thermal pollution from the onsite stormwater facility.
- Garrett County Department of Public Works (DPW) submitted an application for the installation of a utility line in the Little Youghiogheny River. Freshwater Fisheries and Hatcheries (FFHD) staff reviewed the application and decided that the design be revisited as it was stated the utility line was to be installed using open trench method. FFHD requested additional information on the alternative analysis that was done to determine that HDD is not a viable option for this project. Comments were also provided for the application as it stands consisting of time of year restrictions, minimal impact with strict sediment and erosion control, and reclaiming the work area to resemble pre construction conditions.
- Allegany County DPW submitted an application for a culvert replacement on Brashier Hollow Road in Allegany County. Comments for time of year restrictions, minimal impact with strict sediment and erosion control, and reclaiming the work area to resemble pre construction conditions were provided.
- Columbia Gas of Maryland submitted an application for the installation of utility lines in McCoole Maryland that are to be installed with the use of HDD. Comments were provided for minimal impact with strict sediment and erosion control, and reclaiming the work area to resemble pre construction conditions.
- An application submitted by Maryland Department of the Environment, Bureau of Mines for a mine dewatering/ sealing project. An abandoned mine is discharging water causing the hillside to slide in Westernport MD. The mine will be dewatered and then wet sealed with two 12-inch discharge pipes installed in order to prevent any more hillside subsidence. Comments for time of year restrictions, minimal impact with strict sediment and erosion control, and reclaiming the work area to resemble pre construction conditions were provided.
- A temporary logging bridge to be installed on Cotton Run in Oakland Maryland. Comments for strict sediment and erosion control measures were provided along with proper installation with elevated approaches so runoff is not channeled into the stream during rain events.
- On three Project Open Space Properties - two located in Garrett County and one located in Allegany County.

Attended a Land Reclamation Committee meeting for field reviews. Five reclamation sites were visited to approve vegetation coverage for phase two bond releases. Of the sites visited, two of these sites were not approved and tabled. These sites will be visited again in the fall in order to provide more time for ground cover to develop.

Temperature Loggers –

- Central Region staff, along with Patapsco Valley and Maryland Chapter Trout Unlimited volunteers, installed 51 temperature loggers in select streams in Anne Arundel, Baltimore, Carroll, and Harford Counties. The loggers will record water temperatures

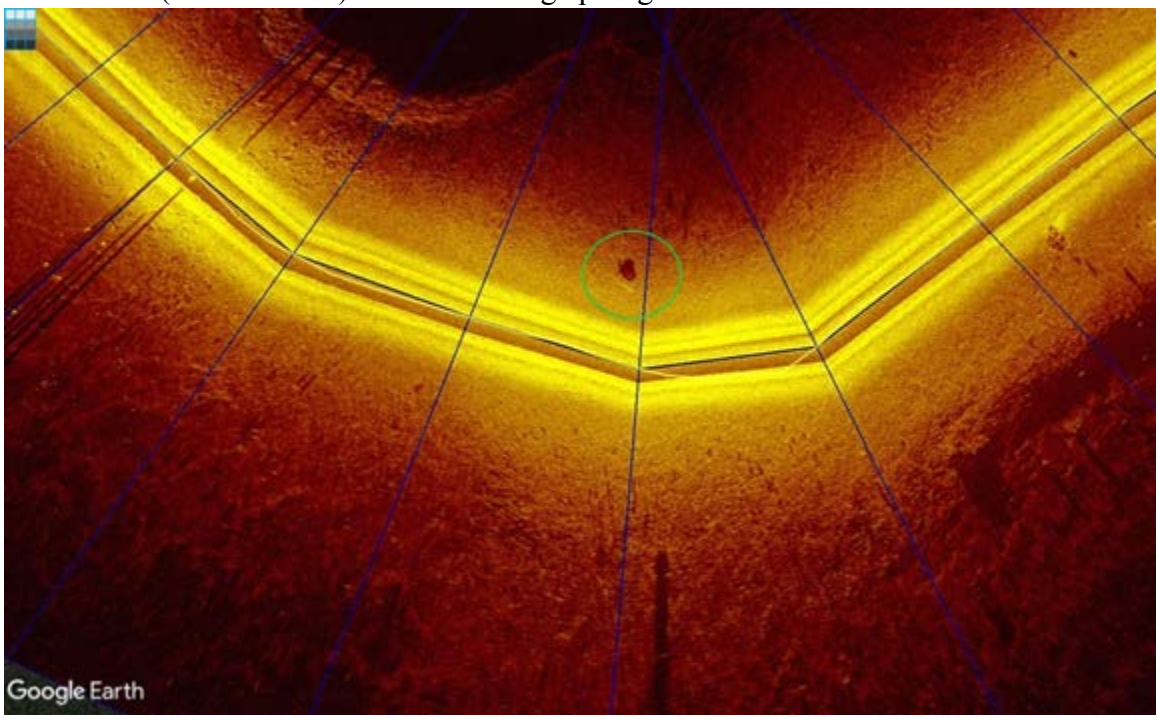
from June 1 – August 31, 2022 and will help identify and monitor brook and brown trout habitats in Maryland.

- Eastern Region staff deployed 14 temperature loggers at various locations in Cecil County. The loggers will record water and associated air temperatures of various coldwater streams over the summer. They will be collected in the fall.

Fish Habitat - Placed 61 additional Christmas trees in Piney Reservoir as part of a fish habitat enhancement project. Staff collaborated with the City of Frostburg to collect trees from homeowners that were then hauled and sunk in the reservoir. The locations of the trees have been marked and side scan images of the habitat structures have been recorded. Staff will collect additional bathymetric data and generate a publicly available map for anglers visiting the resource.

Stream Restoration - Attended site visits at two stream restoration projects in Cecil County. Both projects were completed, however both areas suffered damage from high flow events. The meeting to discuss repair efforts included staff from the Department's Chesapeake and Coastal Watershed Service and the contractor's engineers. The visit facilitated productive discussion on making these projects stable and sustainable in the long-term.

Habitat Mapping – Completed habitat mapping of Wheatley Lake with a Humminbird Helix 8 side scanning sonar unit. Because of the small size of Wheatley Lake, the side scan covered most of the fishable shoreline. This information will be invaluable in fine-tuning the Impoundment Standard Operating Procedures and will be used to correlate species and abundance as it relates to different habitats. Western Region I processed sonar recording for Wheatley Lake and Lake Artemesia that were provided by Southern Region biologists. This information is part of a novel approach to habitat assessments using standardized methods and side scan sonar technology. An interesting image from the survey shows a large fish that can be identified from the bright line and shadow (center screen) as well as bridge pilings and shadows to the left.



Sonar Mapping of Wheatley Lake

Freshwater Fisheries - Stocking and Population Management

Trout - Assisted Bear Creek Hatchery staff with stocking efforts to spread trout throughout the region's trout fisheries at the following locations: Savage River, North Branch Potomac River delayed harvest areas and Fifteen Mile Creek.

Walleye - Savage River Reservoir was provided a maintenance stocking of 30,000 walleye fry from the Joseph Manning Hatchery.

Freshwater Fisheries - Outreach

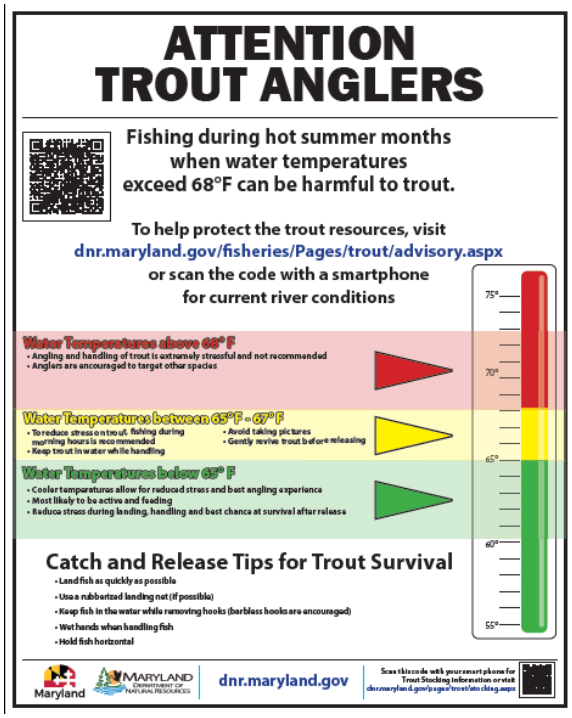
Customer Service - Provided customer service information for inquiries regarding:
trout stocking in private waters.

- fishing Deep Creek Lake.
- gathered information from callers reporting tagged walleye from Deep Creek Lake.
- trout fishing on the Casselman River.

Envirothon - Administered the aquatics testing for the Garrett and Allegany County Envirothons. Testing was held at the Hickory Environmental Education Center and Rocky Gap State Park.

Informational Signage - Developed an informative sign that is to be hung at Broadford Lake as part of a largemouth bass tagging study. With Broadford Lake's high Proportional Stock Density (PSD) value and limited recruitment, staff decided that introducing smaller stock size fish into the system would be the first step in trying to achieve a more balanced bass fishery. Stocked bass will have a PIT tag placed in their cheek giving the ability to identify these fish during future surveys. The sign alerts anglers of the study and the tag placement if one is to consume largemouth bass from the lake.

Staff developed an informational sign alerting anglers to the potential for higher catch and release mortality when angling for trout during warm weather conditions. Recommended angling practices based on water temperatures, as well as fish handling techniques, are provided. These signs will be posted at popular fishing access locations on the North Branch Potomac River tailwater and other popular trout fisheries.



Summer trout fishing guidance informational sign.

Sunfish in Schools Program - Discussed sunfish release locations with several teachers from St. Mary's, Anne Arundel and Prince George's Counties. The "Sunfish in Schools" program teaches basic aquaculture practices to students by rearing sunfish in classroom tanks.Bluegill produced through the program are released into acceptable local ponds.

Master Naturalist Program– Provided a virtual Aquatic Ecosystems/Freshwater Fish talk for two separate Maryland Master Naturalist Programs. Programs were hosted by Patuxent River Park and American Chestnut Land Trust. The aquatic presentation covers different aquatic ecosystems in Maryland, the threats to the stream ecosystems (i.e. invasive species, land use changes, stormwater runoff) and the importance of the riparian buffers for protection of the resource. A Powerpoint presentation on the Fishes of Maryland, with focus on fishes found in their region, was also provided. Participants also had a field day in which they were able to do hands-on fish identification and key to family/species.

Freshwater Fisheries - Angler Access

Continues to mow grass and conduct trash clean ups at the Evitts Creek, Black Oak, and McCoole Fishery Management Areas.

Freshwater Fisheries - Invasive Species

Northern Snakehead Reward Program - Staff tagged nearly 100 invasive northern snakehead in tributaries of the Gunpowder River (Baltimore County), upper Chesapeake Bay and Blackwater River as part of a cooperative effort with the U.S. Fish and Wildlife Service to estimate harvest of snakeheads by anglers/archers in the upper Chesapeake Bay using a reward tagging program. More details about the rewards program can be found here.

Invasive Species Tracker - Staff launched the Maryland Invasive Species Tracker, a new tool for the public to report invasive fishes and other species to Maryland Department of Natural

Resources. The tool has been linked to the department's invasive species webpage and is available here.

Invasive Species Removal Grants - Received, reviewed, and awarded small grants to members of the general public interested in aquatic invasive species removal projects. Recipients included fishing clubs, non-profit organizations, community organizations, university faculty, recreational anglers, and commercial watermen.

Conowingo Fish Lift - Invasive species are continuing to be removed and processed from the fish lifts at Conowingo Dam. Northern snakeheads have been most abundant, with some truly large individuals being removed. To date, much lower numbers of flathead catfish have been removed than last year. Blue catfish have not been collected before in the lifts; however, this year a few individuals have been caught in the east and west lifts and removed. Central Region staff euthanized and transported over 2,000 pounds of northern snakehead and flathead catfish to J.J. McDonnell. These fish were processed and will be donated to the Maryland Food Bank.

Blue Catfish - Collected blue catfish from the Nanticoke River for the ongoing study being conducted by a Salisbury University graduate student. The sheer number of catfish encountered was staggering in each sampling site.

Electrofishing Blue Catfish

Freshwater Fisheries – Coldwater Program

Attended the Southern Division of the American Fisheries Society Trout Committee annual meeting in Syria, Virginia. Participated in state and regional updates for trout fisheries management and discussed upcoming project ideas and goals.

Conducted qualitative surveys in North Fork Sand Run and Moores Run to determine brook trout presence. Both streams have historic water quality issues and brook trout occupancy was not expected. However, improvements to water quality and existing habitat made the streams candidates for the brook trout reintroduction project. No brook trout were observed during passes at three stations in North Fork Sand Run. However, adult and young-of-year brook trout were observed during passes at three stations in Moores Run. While Moores Run will not be a target for reintroduction, it will be considered for habitat enhancement projects to improve the brook trout population.

Conducted a qualitative survey in Aaron Run in the Savage River watershed. Brook trout had been observed in past surveys after a reintroduction project. However, the washout of a beaver dam led to the mobilization of a large amount of sediment in the stream and concerns for the loss of the brook trout population. No brook trout were observed during the qualitative survey.

Freshwater Fisheries - Tidal Bass Program

Worked with an out-of-state vendor to stock young largemouth bass to Marshyhope Creek and Wicomico River in support of concerns in both systems over lower than normal relative abundance levels.

Submitted grant proposals in support of habitat enhancement initiatives and creation of the state's first bass fishing trail in Savage River Reservoir.

Attended multiple black bass fishing tournaments on the tidal Potomac River (Charles County) and Upper Chesapeake Bay (Harford County). Both fisheries appear to be doing well and numerous tournaments have reported 5-fish limits in excess of 20 pounds. Tournament anglers for both fisheries are reporting large densities of sublegal fish (fish < 15 inches), and are looking forward to the June 16, 12-inch season.

Technicians continued work on the tidal Potomac River (Charles, Prince George's Counties) conducting a creel survey of boat and shore-based anglers at select ramps and fishing locations. The work aims to estimate tag-reporting rates for black bass tagged as part of a cooperative project with the Department's Freshwater Fisheries Program, Virginia Department of Wildlife Resources, Potomac River Fisheries Commission, and Washington Department of Energy and Environment. The tag-reporting estimate should fine-tune population estimates for the tidal Potomac River black bass fishery. Completed over 200 creel surveys of angler experiences and reporting of tagged largemouth bass from Potomac River.

Freshwater Fisheries – Other

Prepared and performed maintenance on equipment for fieldwork. Future sampling efforts will be focused on:

- Youghiogheny River Mark/Recapture population estimate
- North Branch of the Potomac River PIT tagging effort to determine age and growth information

Fish Specimens - Added three new species (menhaden, threadfin shad, and quillback) to the fish collection housed at the Southern Region office. There are now over 100 species represented in the collection of preserved specimens that are available for teaching refresher classes for staff and are especially useful for identification of uncommon species.