Freshwater Fisheries Monthly Report – March 2020

Stock Assessment

Staff began data analysis and webpage report updates for Savage River Trophy Trout Fishing Areas, Deep Creek Lake fish population monitoring reports, and Deep Creek Lake northern pike monitoring reports.

Potomac River Walleye - Conducted the annual spring walleye survey on the upper Potomac River in early March. Adult and young-of-year abundance looked good in the section of river near Dam 4. Roughly 14 percent of the sample were fish greater than 20 inches in size. Additionally, the amount of fish in the 10-13 inch size range indicates a strong 2019 year-class. Twenty adult walleye were collected and transported to the Joseph Manning Hatchery to serve as broodstock for walleye fingerling production. These fingerlings will be stocked later this spring into impoundments and major rivers across the state. Supplemental stocking of fingerling walleye has been shown to significantly contribute to the population and help maintain a productive fishery.

A 28 inch female walleye collected from the upper Potomac River

Habitat and Water Quality

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

- Scientific collection permit review for Trout Unlimited. Trout Unlimited staff and volunteers will collect aquatic invertebrate samples from Sand Spring Run, a tributary to Mudlick, Blue Lick, Maple Lick, and North Fork of Crabtree Creek as part of riparian restoration projects in these locations.
- Reviewed and fully supported six Allegany County reforestation projects proposed by the Western Maryland Resource and Conservation Development Council to the Chesapeake & Atlantic Coastal Bays Trust Fund. About 44 acres of agricultural land will be converted

to forestland in the upper Potomac River watershed. This initiative will provide for long term water quality protection and enhancement in the upper Potomac River watershed.

- Reviewed the Rocky Gap State Park application for a proposed culvert replacement in Rocky Gap Run. Recommendations were made to assure that impacts were minimized to the greatest extent possible and that aquatic and riparian habitat was conserved and restored.Reviewed a time of year waiver request by the State Highway Administration regarding a water line project along Wilson Run in the Town of Oakland. The stream is Use III (coldwater resource), however no trout have been collected in this stream due to the amount of urban run-off it receives.
- Reviewed a State Highway Administration project that would extend the grout lining up the sides of the culvert pipe at I-68 over Red Run in order to extend the life of the culvert pipe. To avoid elevated pH spikes, Freshwater Fisheries Program recommends that the project take place during low flow conditions to avoid grout contact with the stream water.
- Reviewed a time of year waiver request from the State Highway Administration regarding a culvert headwall construction over a tributary to Meadow Run as part of the Route 219 expansion project. This Use I tributary stream does not show up as a blue line on the topographic map and there are no spawning gamefish species in the immediate vicinity that need the closure protection. However, the contractor still needs to use best management practices (BMPs) that prevent sediment from entering Meadow Run. In addition, no wet concrete should come into contact with the water. The pipe extension and riprap should not pose an impassable fish barrier to the nongame fish species that may be inhabiting the immediate area.
- State Highway Administration to replace a 15 inch culvert pipe under MD 17 in Frederick County that conveys to an unnamed tributary to Middle Creek. Instream construction is prohibited during the Use III (coldwater resource) restriction period of October 1 through April 30 of any year. Strict erosion and sediment control measures were recommended.
- The Environmental Review Program to repair a bridge over Big Hunting Creek in Frederick County. Big Hunting Creek is a coldwater stream that supports a wild population of brown trout and is a very popular stream with trout anglers. Instream construction is prohibited during the Use III (coldwater resource) restriction period of October 1 through April 30 of any year to protect spawning trout and incubating eggs. Recommendations were made to prevent water contact with curing cement/grout to prevent harmful pH spikes.
- The State Highway Administration for bridge renovation work on US 15 over Big Hunting Creek in Frederick County. Big Hunting Creek is a coldwater stream that supports a wild population of brown trout and is a very popular stream with trout anglers. Instream construction is prohibited during the Use III (coldwater resource) restriction period of October 1 through April 30 of any year to protect spawning trout and incubating eggs. Recommendations were made to prevent water contact with curing cement/grout to prevent harmful pH spikes.
- The State Highway Administration for concrete paving of a bridge structure located on Two Mile Run in Garrett County. Brook trout have been documented in Two Mile Run

and no instream construction is permitted during the Use III closure period. Extra precautions were requested to prepare the site prior to paving to prevent water contact with the curing cement to prevent harmful pH spikes as the area is known for flash flooding. The entire limit of disturbance must be planted with native plants and shrubs to ensure a riparian buffer is established and to provide stream bank stabilization after the construction process.

Broadford Lake Restoration Project

- The natural resource and education professionals,"Team Broadford", met to discuss native tree, shrub, and wildflower plantings around the lake. A species list was compiled and ordered with tentative planting dates in April.
- Team Broadford's fish biologist gave a presentation on the "Fishes of Broadford Lake" to all of Broadford Elementary School's fifth grade students. Many fish stories were told at the end of the presentation by the 80 enthusiastic students.

Acid Mine Drainage Treatment - Attended a meeting with Maryland Department of the Environment's Abandoned Mine Lands Division and Trout Unlimited to discuss grant opportunities to address priority acid mine drainage treatment projects in western Maryland. The U.S. Office of Surface Mining Watershed Cooperative Grant Program (WCAP) announced that funds are available in 2020 that can be used for building new treatment systems as well as for the maintenance needs of existing acid mine drainage treatment systems. The funds are available to 501(c)(3) organizations who then can work cooperatively with the appropriate state agencies to identify and implement the project. We decided the priority project site was an existing acid mine drainage system in the Cherry Creek sub-basin in the Deep Creek Lake watershed. The project is in need of maintenance in order to treat the acid mine drainage effectively. Trout Unlimited will serve as the applicant and the Freshwater Fisheries Program will provide in-kind service by conducting fish population assessments downstream of the project site.

Hoyes Run Embrace A Stream Project - A Garrett College student volunteer conducted post project water quality analysis in Hoyes Run upstream of the project site and at a lower downstream station as part of the grant's water quality monitoring agreement. Riparian restoration efforts are proving successful as turbidity, suspended solids, and color levels were quite low even after a heavy rainfall event 24 hours prior to the sampling. In fact, these values were lower downstream of the restoration site indicating a reduction in sediment inputs. For example, the turbidity value was 5.49 units upstream of the project site and only 2.68 units at the downstream sample site. In addition, we worked with two Hoyes Run landowners to enroll in the Backyard Buffer program. They each will receive 25 native tree and shrub species to plant along the stream.

Hoyes Run at the downstream sample location 24 hours after a heavy rain event. The turbidity level was very low at 2.68 nephelometric turbidity units. Photo by Tess Nichols.

Reef Ball Habitat - Staff deployed 14 small concrete reef balls into two locations of St. Mary's Lake (St. Mary's County) to provide fish habitat. Cedar branches were added to most reef balls to increase habitat complexity. These reef balls are among the first deployed into freshwater impoundments in Maryland, and are needed to replace standing timber that was once prevalent in the lake. Over time, the standing timber has degraded and no longer provides the complex, fish structure. The reef balls were built by the Maryland Conservation Corps (MCC) at Merkle Wildlife Sanctuary (Prince George's County) with molds provided by the Chesapeake Bay Foundation. The project is yet another example of cooperation between agencies and groups to improve aquatic habitats in southern Maryland.

MCC crewmember Riley Schwartz with a reef ball prior to deployment. Schwartz was integral to the project's success.

Stocking and Population Management

Trout - On March 3, the Youghiogheny River catch-and-return trout fishing area was stocked with 10,000 brown trout fingerlings (117/pound). It was stocked again on March 10 with 10,000 brown trout (100/pound) and 25,000 rainbow trout fingerlings (100/pound). The source of the brown trout were from the Cushwa Hatchery and the rainbow trout were from the Albert Powell Hatchery.

COVID -19 Emergency Trout Stocking - Following Governor Larry Hogan's executive orders to limit spread of COVID-19, state employees were required to suspend all field activities, including trout stocking. Without the scheduled stocking, state hatcheries lacked room needed to continue production for future seasons. Also, as the trout in these facilities continued to grow, crowding occured which would eventually reduce water quality and result in higher mortality. Removing fish and stocking them into public waters became an urgent matter. In just four days, Regional Freshwater staff and hatchery staff worked together to stock more than 115,000 adult trout into as many state waters as possible while following Governor Hogan's guidelines for social distancing and protection of public health. Although current circumstances forced staff to deviate from the published 2020 Trout Stocking Schedule, trout fishing opportunities have been provided to anglers throughout the state.

Stocking Permits - A total of 12 pond stocking permits were issued in February and 27 for March (through March 25).

Outreach

Provided information in response to customer service inquiries including:

- Private pond owner fish stocking advice
- Angler inquiry regarding North Branch Potomac River fingerling stocking
- Allegany County private pond owner regarding raising trout in his coldwater pond
- Angler inquiry regarding the legality of jugging in freshwater
- Angler regarding the legality of operating an all terrain vehicle (ATV) side by side on Deep Creek Lake (if it was ice covered)
- Angler inquiry regarding opening dates for walleye and bass in Deep Creek Lake; and general trout stocking inquiries.

Professional Development Day - Assisted with the planning and participated in the Conservation Education Matrix Team Professional Development Day. The topic this year was *Community Science: Increasing Public Engagement in Conservation*. A few of the study sessions offered during the day included: My Coast, Winter Salt Watch, Zombie Crab, and Schoolyard Urban Heat Studies.

Angler Access

Performed land maintenance at North Branch Potomac River fisheries management areas. Also posted fishing regulation signs along the special trout fishing areas in Garrett and Allegany counties.

Invasive Species

Discussed with constituents the use of social media methods to either lead organization of, or partner in, the development of an invasive fish tournament during fall of 2020.

Northern Snakehead - Met with representatives from states within the Mid-Atlantic region to discuss results of monitoring snakehead populations and management strategies. One of the major take-aways was that harvest is effective at reducing population sizes of snakeheads. Unfortunately, the species was found in new locations in 2019, indicating that both introductions by humans and natural dispersal are increasing the geographic range of the species in the Chesapeake Bay watershed. Another major take-away was that snakeheads are having ecological impacts in some areas, but not others, which could be explained by differences in the abundance of snakeheads in the area.

Blue Catfish - In support of a request from the Maryland Department of Agriculture, staff wrote a letter in support of blue catfish commercial harvest and presented the letter to J.J. McDonnell, a well-known fish processing business in Maryland.

Biologists confirmed radio telemetry receiver station site approval along the tidal freshwater Patuxent River, which include private, state, and county-owned properties. The receiver stations will provide passive monitoring of tagged blue catfish, part of a larger, cooperative project between the department, Atlantic States Marine Fisheries Commission, and the United States Geological Survey's Leetown Science Center (West Virginia). The aim of the project is to learn about the movements and habitat use of blue catfish, an invasive fish species in the Chesapeake Bay and its tributaries.

Radio Telemetry Receiver Station

Brook Trout Program

Began field work for the eDNA brook trout research project. A stream site was located on Green Ridge State Forest. Sampling locations and sites were then identified and marked. A fish holding structure was constructed and the initial fish movement was conducted. Unfortunately, the COVID-19 pandemic has terminated the work for now, and the fish were removed until the project can be restarted.

Continued the effort to develop a population estimate for the mainstem upper Savage River brook trout population in the put-and-take section. Sampling was repeated from the mouth of the river (where it enters the reservoir) upstream to the mouth of Poplar Lick where the put-and-take section ends. To date, initial capture and marking of brook trout has not been sufficient to accomplish the goal of developing a population estimate. Staff will continue looking at other options to obtain this needed information.

Continued data entry and analysis efforts and began discussing plans for updating the Brook Trout Program webpage.

Worked on writing abstracts for the upcoming international wild trout meeting in the fall of 2020 in Montana. Program biologist is a member of the steering committee for this meeting.

Tidal Bass Program

Attended the Bassmaster Classic and Conservation Director's meeting. Outreach materials and priorities of bass conservation for BASS (Bass Anglers Sportsman Society) were obtained and will be presented during the Black Bass Advisory Subcommittee meeting in April.

Created and printed signs encouraging the reporting of tagged largemouth bass caught from Potomac River. These signs were delivered to partners of the inter-jurisdictional management team that developed the monitoring plan for largemouth bass on Potomac River. Partners include staff from District of Columbia's Department of Energy and Environment and Virginia Department of Game and Inland Fisheries. Work to tag largemouth bass has been postponed until March and early April of 2021.

Met with representatives from Maryland Park Service and Engineering units to discuss an upcoming marina development project at Rogues Harbor. Details will be provided to the Black Bass Advisory Subcommittee in April.

Met with political scientists from the University of California and Washington University to discuss collaboration on work that explores how regulations influence angler behavior and how certain angler behaviors can be encouraged to better ensure conservation of largemouth bass and protection of the fisheries.

Examined patterns of summer water temperature change over the past three decades in tidal rivers to learn where the rate of change has been greatest. This effort will direct conservation messages and best management practices more effectively.