

Freshwater Fisheries Monthly Report – December 2018

Stock Assessment - Staff initiated data analysis for fish population surveys conducted in summer/fall 2018.

Habitat and Water Quality

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

- Maryland Department of the Environment regarding time of year waiver request for instream construction project in Dry Run near Cumberland. The project involved rerouting a storm drain discharge in order to protect against private property flooding. There has been no documentation of wild trout presence in this stream. The instream disturbance was minor and only for one day. Freshwater Fisheries had no objection to the waiver in order to have the project completed prior to higher flows in the spring.
- Department of Natural Resources Environmental Review Program regarding a proposed increase in water appropriation from Mill Run in Allegany County. Comments were submitted to improve diversion control structures to reduce loss of flow during low flow conditions and reduce impounding of unneeded water to maintain temperature regime required by brook trout.
- Environmental Review Program supporting proposed stormwater management pond retrofits that discharge into Carroll Creek, designated as a Use III nontidal coldwater stream. The retrofit will combine both ponds into a single sand filter with underdrain that reduces surface discharge and instream temperatures.
- Environmental Review Program regarding replacement of two culverts in the headwaters of a tributary to Braddock Run in Allegany County. The affected stream is ephemeral and unlikely to impact the brook trout resource further downstream or impede fish passage. Stringent sediment and erosion control practices were recommended to protect trout egg survival and benthic macroinvertebrate habitat.
- Department of Environment regarding the construction of two revetments to protect property from shoreline erosion on Deep Creek Lake. Standard comments were provided that require boulder clusters to be incorporated to maintain shoreline fish habitat.
- Environmental Review Program regarding the construction of a large business park/distribution center in Hagerstown. The project will result in approximately 50 acres of additional impervious surface and an associated 2.5 acre stormwater management facility in the Antietam Creek watershed. Recommendations were made to implement stormwater management strategies which effectively remove pollutants from the first one-half inch of runoff from impervious surfaces, but also do not result in discharges exceeding Use III temperature standards (20 degrees Celsius). Pervious asphalt and designs that feature subsurface treatment of stormwater were recommended to prevent downstream temperature spikes during storm events.
- Department of Environment and Environmental Review Program regarding the emergency breaching and stabilization of an unstable pond embankment in the headwaters of Overshot Run,

a brook trout stream. Freshwater Fisheries is providing recommendations throughout the process to protect the trout resource from sedimentation and elevated stream temperatures.

Western Region Land Stewardship Committee - Provided comments for potential state acquisitions for the following parcels:

- A 21.75 acre parcel in the Bear Pen Run watershed and a 380 acre parcel in the Crabtree Creek watershed, both sub-basins of the Savage River watershed. Both streams support naturally reproducing brook trout populations and are managed under the zero creel limit for brook trout special trout fishing area. The Freshwater Fisheries Program fully supports these acquisitions. One of the goals of the 2006 Maryland Department of Natural Resources Brook Trout Fishery Management Plan is to increase public ownership of land in watersheds supporting brook trout population. Acquiring these properties will provide long-term water quality and brook trout habitat protection in the Savage River Watershed.

Hoyes Run Riparian Zone Restoration Project - The Western Region District 1 Fisheries Manager was the guest speaker at the Youghiogheny Chapter of Trout Unlimited monthly meeting where an update presentation was provided on the project. Phase 1 was completed in 2018 which included livestock exclusion fencing on 1,300 feet of Hoyes Run, 900 feet of an unnamed tributary and 125 feet along the Savage Spring channel. Also completed was a hardened livestock crossing/water access, wildflower plantings in the riparian zone and placement of bluebird and wood duck nesting boxes along the stream. The project was fully funded by the Trout Unlimited Embrace A Stream Grant, The Youghiogheny Chapter of Trout Unlimited, the Youghiogheny River Watershed Association, The National Capital Chapter of Trout Unlimited and generous private donations. Brook trout abundance has shown an increase in just one growing season along Hoyes Run. Additional funding has been secured through the U.S. Department of Agriculture, the Trout Unlimited Embrace A Stream Grant and prize money, as well as additional private donations to complete Phase 2 of the project. Phase 2 includes the development and construction of two livestock watering troughs away from the streams, additional fencing along the unnamed tributary stream, a hardened crossing on the tributary stream, a pasture grazing rotation plan and reconstruction of the Savage Spring springhouse. Phase 2 will be completed in 2019, and a public open house to showcase the project will be held in July 2019.



Hoyes Run riparian zone two months after livestock exclusion fencing and wildflower plantings were completed, August 2018.

Temperature Loggers - With a break in the continuous rainfall and high stream flows, Central Region staff was able to remove WaterTemp Pro temperature loggers from the upper Gunpowder River, Walker Run, Silver Run, Bee Tree Run, Gunpowder Falls below Blue Mount Road, Gunpowder Falls at Glencoe Road (Baltimore Co.), tributary to Falling Branch (Harford Co.) and left and right forks of Jabez Branch (Anne Arundel Co.).

Western Region staff retrieved temperature recorders from four stations in the North Branch Potomac River from Bloomington to Pinto. Temperature data will help with trout management efforts in the zero creel limit trout fishing area.

Stocking and Population Management - The Youghiogheny River Catch and Return Trout Fishing Area was stocked with 9,000 Kamloops-strain rainbow trout fingerlings (7.5 fish/pound, source Mettiki Hatchery).

Outreach- Staff handled customer service requests for information related to: public access along the Youghiogheny River; trapping opportunities on fishery management areas; the Casselman River Brook Trout Restoration Project; angler access information within the zero creel limit brook trout fishing area;

smallmouth bass and walleye fishing opportunities on the upper Potomac River; clarification of put and take trout fishing boundaries; reminder to wading anglers to look out for and avoid treading on trout redds; and fish species identification of multiple angler catches.

Angler Access - Staff performed land maintenance and litter pick up at the Evitts Creek Ponds and North Branch Potomac River fishery management areas.

Invasive Species - Staff continued collaboration with U.S. Fish and Wildlife Service to assess ecological impacts of northern snakeheads in tidal freshwater of Blackwater National Wildlife Refuge.

Tidal Bass Program

Staff met with Virginia Department of Game and Inland Fisheries, Leesylvania State Park and the president of Maryland Bass Nation to discuss building and logistics of a weigh-in station at the park.

Staff finished analyzing annual assessment data from the tidal bass survey that concluded in October; results will be presented to the general public by March 2019.

Staff finalized plans with creators of Water Reporter to finalize the product for offering another tool for public to report pollution to tidal freshwater systems. The tool, which is a mobile app, will be advertised in the upcoming 2019 Maryland Guide to Fishing and Crabbing and via press release.

Staff finalized a publication of a study documenting the effects of catch-and-release fishing in the bass fishery on Potomac River in the journal, *Fisheries*.

Brook Trout Program

Staff completed the draft report summarizing the results of the five-year brook trout assessment in Maryland. This summary is the first comprehensive effort to ascertain the status of our statewide brook trout population, based on empirical data, and will be the basis for future monitoring work, directing conservation and restoration efforts, and for measuring success towards the Chesapeake Bay Agreement's Brook Trout Outcome.

Staff met with Trout Unlimited's Homeland Waters Program to discuss possible restoration and reintroduction projects in western Maryland. Trout Unlimited is committed to expanding the program into western Maryland and has committed a new staff member towards this effort. We will be working with Trout Unlimited on several projects in Allegany and Garrett counties.

Staff visited two potential brook trout restoration and reintroduction sites in the upper Savage River headwaters. Both sites contain fish passage barriers that limit brook trout recolonization, as well as instream impoundments that need to be removed. Staff will be working with several conservation groups to develop plans and then submit requests for proposal to funding agencies to try to secure resources to implement these improvement projects.

Staff continued to work on preparations for the 6th East Coast Trout Management and Culture meeting being held in Frostburg from June 10-12, 2019. Efforts include developing registration information, call for papers, donation solicitation, and abstract submission. In conjunction with this meeting, staff will also be hosting the annual meetings for the Trout Committee for the Southeastern Division of the American Fisheries Society and the national Eastern Brook Trout Joint Venture.

Staff presented information about brook trout in Maryland to the 6th grade class at Silver Creek Middle School in Montgomery County. Topics ranged from what brook trout are to why they are important and what work is being conducted to protect them.

Staff completed an update to the brook trout patch layer in Maryland. This patch layer is used by the Chesapeake Bay Program to measure progress toward the Brook Trout Outcome under the Vital Habitats Goal of the Chesapeake Bay Agreement, and was derived from data collected during our recently completed statewide five-year inventory effort.

Staff worked on edits to two manuscripts that they are co-authoring with researchers from U.S. Geological Survey's Leetown Lab and University of Maryland Appalachian Lab on statewide brook trout genetics and population monitoring done in western Maryland.

Staff gave a presentation on brook trout in Maryland at the Marshy Point Nature Center. Topics ranged from brook trout life history and biology to current management and conservation efforts in Maryland.

Other - Staff winterized and performed routine maintenance on the electrofishing and work boats as well as mowing equipment and trailers.