

Freshwater Fisheries Monthly Report – September 2016

Stock Assessment

Cove Run Brook Trout Restoration Project - Nineteen students enrolled in Northern Garrett High School's AP Biology Class participated in a day-long brook trout population survey, aquatic macroinvertebrate survey, water quality analysis, and stream habitat assessment of Cove Run downstream of the headwater restoration sites. Reproduction for brook trout was considered good in 2016 with 64 adult brook trout and 150 young-of-year (YOY) brook trout per mile being documented. Summer temperature data were retrieved and the maximum temperature was 71° F, and only recorded on one date for a 1-hour period.



Northern Garrett High School students participating in a brook trout population survey in Cove Run.

Youghiogheny River Trout Population Survey - The Catch-and-Return Trout Fishing Area was surveyed at the Hoyes and Sang Run stations. Both stations had population estimates less than management goals with the Hoyes station having 414 trout per mile and the Sang Run station having only 114 trout per mile. The Hoyes station contained the largest trout - a 24.5 inch brown trout and a 17.3 inch rainbow trout. The largest trout at the Sang Run station was an 18 inch brown trout. Thanks to Garrett College Fisheries Management class students, Western II Freshwater Fisheries staff, and Brook Trout Program staff that participated to get the surveys accomplished.



Garrett College's Fisheries Management Class with an 18 inch brown trout from the Youghiogheny River C&R Trout Fishing Area at Sang Run.

Trout Surveys - Population monitoring surveys were conducted at the following stream reaches in Washington County.

- Warner Hollow Creek – only 1 adult brook trout collected in station
- Little Antietam Creek
 - Upper station – only 1 adult and 2 YOY brook trout collected in station
 - Middle station – 466 adult and 505 YOY rainbow trout per km
 - Lower station – 135 adult and 196 YOY rainbow trout per km



Rainbow trout collected from Little Antietam Creek

Brook Trout Population Monitoring – The following streams/tributaries were surveyed to monitor the status of their brook trout population:

- Baltimore County Tributaries - Third Mine Branch, unnamed tributary to Little Falls north of Wilson Road, unnamed tributary to Little Falls south of Wilson Road and Charles Run. Third Mine Branch contained a small population of both brown trout and brook trout. The unnamed tributary north of Wilson Road contained brown trout adults and YOY and one brook trout adult. The unnamed tributary south of Wilson Road contained one brown trout adult, several brown trout YOY and one brook trout YOY. Charles Run contained six brook trout YOY and two brown trout adults.
- Quail Creek (Phoenix Road tributary), Panther Branch, and First Mine Branch (Baltimore Co.). Quail Creek had one brown trout YOY, Panther Branch had five adult brown trout and 78 YOY brown trout and First Mine Branch had three adult brook trout as well as five brown trout adults and three brown trout YOY.
- Tributary to First Mine Branch (Baltimore Co.). This was the first time this tributary was surveyed for trout. Nine brook trout adults and 13 brook trout YOY were collected as well as four brown trout adults and 49 brown trout YOY. Also of interest were four YOY tiger trout (brook x brown hybrid) that were also collected.
- Bee Tree Run above Bee Tree Road. An excellent population of brown trout adults (56 kg/ha, 50 lbs/acre) was collected in the small freestone stream. The YOY brown trout density was 1067 YOY/kg (1717 YOY/mile).
- Good Hope tributary to Paint Branch at Hobbs Drive, with assistance from Montgomery County Department of Environmental Protection staff. One yearling brown trout was collected in the Hobbs Drive station. This was the 38th consecutive year the Hobbs Drive station was surveyed for brown trout.

Gunpowder Trout Surveys – Conducted surveys on Gunpowder Falls at the dam/Falls, Masemore Road and Blue Mount stations. The adult brown trout standing crop was 121 kg/ha in the dam/Falls station, 81 kg/ha in the Masemore Road station and 38 kg/ha in the Blue Mount Road station. The YOY brown trout densities were 151 YOY/km in the dam/Falls station, 695 YOY/km in the Masemore Road station and 454 YOY/km in the Blue Mount Road station. Sixteen fingerling rainbow trout stocked May 9th above Falls Road were collected in the dam/Falls station as well as three rainbow trout fingerlings in the Masemore Road station and showed good growth. No adult rainbow trout were collected at any of the sites. A tiger trout (brown x brook hybrid) adult was collected in the dam/Falls station and when compared to photos of a tiger trout collected in the same station in 2015, it is the same trout. The tiger trout was eight inches in length in 2015 and 10 inches in 2016. The largest brown trout collected was 22 inches in length and weighed 3 pounds. Staff from Freshwater Fisheries Western Region II, Eastern Region, Brook Trout Program, Director of Regional Operations of Freshwater Fisheries and Maryland Biological Stream Survey (MBSS) assisted with the surveys.



The same tiger trout (brown x brook hybrid) collected during two different years; (L-R) 8 inches in 2015 and 10 inches in 2016.



A nice 22 inch, 3 lb brown trout - Gunpowder Falls

North Branch Patapsco River - Conducted electrofishing surveys in the North Branch Patapsco River above and below Lawndale Road (Carroll Co.). Multiple year classes of brown trout from YOY to 13 inches were collected at both sites.

Tagged Brook Trout - Continued the radio telemetry search for radio tagged brook trout in the upper Gunpowder River above Prettyboy Reservoir. All brook trout known to be alive were located. Staff received a call from an angler following the last search that he had deep hooked a brook trout in the pool below York Road #1 and so kept the trout. As he was cleaning the trout, tag #800 fell out of the body cavity confirming the western most and farthest upstream brook trout we had found in the watershed was gone. Currently, tagged trout #790 from the Gunpowder Road area hasn't been found since March 25, # 741 from the Kern Road area hasn't been found since April 8 and # 891 that

moved from the Gunpowder Road bridge to the Grave Run Road bridge has not been found since May 15. Freshwater Fisheries staff recommends that any brook trout that are caught by anglers in the upper Gunpowder watershed be handled carefully and released back into the water as quickly as possible.

Habitat and Water Quality

Environmental Review - Provided comments to the Environmental Review Unit (ERU), Maryland Department of Environment (MDE), Maryland State Highway Administration (SHA) or other agencies regarding:

- A time of year waiver request for a bridge project over Cherry Glade Run in Oakland. The stream was recently opened up as a natural stream channel after being buried underground for many years. There are no trout resources within the immediate project site so the waiver was granted.
- Timber sale review on the Mount Nebo Wildlife Management Area to improve habitat for early-succession forest species. There were no aquatic resource concerns as best management practices for sediment and erosion control were in the plan.
- Road improvements for access to a communications tower on Warrior Mountain Wildlife Management Area. There were no aquatic resource concerns as best management practices for sediment and erosion control were in the plan.
- Time of year waiver request on Rocky Gap Run for bridge abutment replacement. Allegany County cited human safety reasons for the expedited bridge abutment replacement. The site is located near the confluence of Evitts Creek and Rocky Gap Run, and our sampling showed that brook trout were present well upstream of the project site. However we recommended that the stream not be dewatered during the required work period at the project site location.
- Request by Maryland-National Capital Park and Planning Commission (M-NCPPC) to survey and help manage a pond located at Brandywine North Keys Community Park in Prince Georges County. A visual inspection was performed and the pond has the potential to provide another quality fishing location in southern Maryland. In the coming weeks, depth soundings will be performed to determine the best fish sampling methods for upcoming work.

Lands Reclamation Committee (LRC)

- Participated in the September monthly meeting of the LRC. We voted on Phase I bond releases for fifteen reclaimed strip mines in Allegany and Garrett Counties. Fourteen were given approval, while one strip mine was denied bond release due to inadequate re-vegetation on part of the site. The site will be revisited in spring 2017.

Lands Stewardship Committee (LSC) – Provided comments on the following acquisitions:

- A 43-acre property adjacent to Cunningham Swamp Wildlife Management Area. Acquisition would provide water quality protection in the North Branch of the Casselman River Watershed. Freshwater Fisheries supports this acquisition as one of our main objectives is to promote an ecosystem approach to protecting brook

trout with particular emphasis on public lands. Currently there is a major effort by state, local, private, and non-profit organizations to restore brook trout populations in the Casselman River Watershed.

- A 25-acre parcel adjoining Savage River State Forest. The parcel borders Spring Lick and Crabtree Creek, both part of the Zero Creel Limit for Brook Trout Fishing Area. The 2006 Maryland Department of Natural Resources Brook Trout Management Plan's goal is to restore and maintain healthy brook trout populations in Maryland's freshwater streams and provide long-term social and economic benefits from a recreational fishery. Public ownership of this property will provide long-term water quality protection in the Savage River Watershed and additional recreational angler access.
- Three parcels totaling about 565 acres in the Town Creek Watershed and adjoining the Green Ridge State Forest. Freshwater Fisheries supports this acquisition as it will provide long-term water quality protection in the upper Potomac River watershed.

Environmental Quality Incentives Program (EQIP) - Participated in the Garrett County EQIP Advisory Board meeting. Funding is available for private landowners to improve environmental conditions on their properties. Priority allocations of these funds will be given to applicants that apply for livestock exclusion fencing along Use-III streams that support native brook trout.

State Forest ID Team - Participated with the inter-disciplinary team to review the FY18 Annual Work Plans which included timber sales, wildlife habitat improvement projects, and research projects within the Green Ridge, Savage River, Potomac, and Garrett State Forests.

Upper Potomac Algae Study - Completed the final biweekly sampling of algae on the upper Potomac River for 2016. Freshwater Fisheries has partnered with Hood College in addressing toxicity from cyanobacteria blooms in sections of the river. Water quality data, relative algae/submerged aquatic vegetation abundance, and toxicity samples were collected from five transect stations from White's Ferry to Taylor's Landing. Toxicity samples are being sent to outside researchers for further analysis. A more detailed report on 2016 upper Potomac River algae survey results will be prepared later this year.

Nuisance Vegetation - Treated the following ponds for nuisance vegetation; Burkittsville Community Pond, Fairview Outdoor School pond in Clear Spring, MD, and Butler Montessori School pond (part of Seneca Creek State Park) in Darnestown, MD.

Vegetation Mapping - Continued assessing beds of submerged aquatic vegetation (SAV) in the tidal Potomac River. Work includes mapping the locations of SAV beds, as well as determining the vegetative species that comprise those beds. SAV beds serve as vital habitat and nursery areas for largemouth bass and other species. Many beds seem to be dominated by coontail (*Ceratophyllum demersum*) and *Hydrilla verticillata*, but *Valisneria americana*, European milfoil (*Myriophyllum spicatum*), water stargrass (*Heteranthera dubia*) are also common.



Mallows Bay - Assisted a team from Duke University, Syracuse University, University of North Carolina, NOAA, and Maryland DNR Heritage Division in completing multiple fixed wing drone flights over Mallows Bay to collect ultra-high resolution imagery. These photos will be stitched together to construct a 3D model of the area including shoreline, ecology and shipwreck features. Specialists will interpret data from the images which will later be incorporated into the management plan of the Mallows Bay National Marine Sanctuary.

Outreach

Fishing Club Project - Met with the Garrett County Watershed Coordinator and Southern Garrett High School's Bass Fishing Club to discuss possible projects the club may want to undertake for community service. We discussed "Adopt Broadford Lake" which would include preparing a watershed management plan and work with the county and state as well as private landowners to implement best management practices along tributary streams to Broadford Lake to improve water quality.

National Hunting and Fishing Day – Staffed a booth and casting demo at the 2016 National Hunting and Fishing Day at the Associated Gun Clubs of Maryland property, Marriottsville.

Gear Workgroup - Participated in the Finfish Trotline and Gear Workgroup to craft the department's policy on catching finfish using trotlines in tidal waters. Trotlines are currently used by commercial watermen to catch blue catfish in tidal waters. The concern, from those opposed to trotlines, is the bycatch that can be unintentionally hooked using this gear. The workgroup came up with an initial proposal that restricted use of trotlines in parts of the Chesapeake Bay, the depth they could be used, and the size and type of hooks that would be allowed.

Angler Access

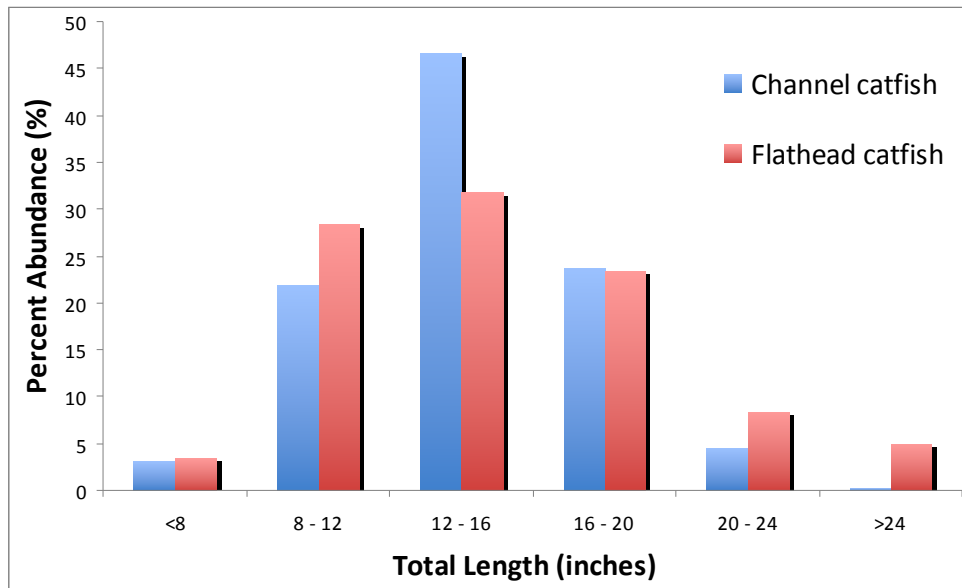
Conducted land maintenance, grass mowing, and litter pick-up at the North Branch Potomac River Fishery Management Areas at McCoole, Black Oak, and Evitts Creek Ponds.

Stocking and Population Management

Brown Trout - The Youghiogheny Catch-and-Return Trout Fishing Area was float-stocked between Hoyes Run and Sang Run with 6,400 brown trout fingerlings (11/lb) from the Cushwa Hatchery.

Invasive Species

Catfish Survey - Completed a catfish survey on the upper Potomac River. Four sections of the river from White's Ferry to McCoy's Ferry were sampled at night by boat electrofishing. A total of 479 channel catfish and 60 flathead catfish were collected during these surveys. Total length for channel catfish averaged 14.1 inches, while flathead catfish averaged 15 inches.



Length-frequency distribution for channel and flathead catfish collected from 2016 upper Potomac River surveys

Data from this survey will be used to assess channel and flathead catfish distribution, age, growth, and survival. Freshwater Fisheries staff asks that anglers please keep any invasive flathead catfish that they catch to help control their population (dnr2.maryland.gov/fisheries/pages/catfish.aspx).



Flathead catfish caught by angler on the upper Potomac River

Blue Catfish - Participated in a blue catfish panel at the Maryland Restaurant Show in Timonium, Maryland. The panel discussion covered a brief history of blue catfish in Maryland, the impact that these fish have on native species and what steps are being taken to monitor and manage the population.

Freshwater Fisheries will be working with the National Fish Health Research Lab in Leetown, W.Va., to collect blue catfish stomach items for analysis. The lab is working on a new assay method that should make identification of prey items that are in an advanced state of decomposition more affordable. This is extremely important since many blue catfish stomachs examined are either empty or contain unidentifiable prey items.

Flathead Catfish - Assisted Pennsylvania Fish and Boat Commission staff with an ongoing pilot study of invasive flathead catfish in the Susquehanna River Watershed. The goal is to estimate population size and obtain age, growth, and diet data. Preliminary results are promising, and additional funding is being sought to continue the work in 2017 and south into Maryland's portion of the Susquehanna River.

Brook Trout Program

Completed annual brook trout population monitoring efforts in the Upper Savage River (USR) watershed (Garrett County). A total of 24 stations on tributaries and the mainstem USR were sampled. Reproduction looks to be very good again this year, and many large brook trout were collected. Data analysis will be done this winter by Dr. Robert Hilderbrand at the University of Maryland's Appalachian Laboratory and a report provided in late winter/early spring of 2017. This is the 10th consecutive year of brook trout population monitoring in the USR, and we have developed a continuous data set that will help us to manage and protect for the long term this incredibly important and unique resource.



Brook trout Program biologists with 4 large Brook trout (11'-13") collected during annual 2016 monitoring work in the Upper Savage River.



Beautiful 13"+ male Brook trout collected during Upper Savage River monitoring work during the summer of 2016.

Participated in the quarterly Eastern Brook Trout Joint Venture (EBTJV) steering committee meeting and the Chesapeake Bay Program's Brook Trout Action Team meeting. Of particular interest from the EBTJV steering committee meeting was discussion involving the EBTJV draft report that re-analyzed the initial brook trout range wide census at a much finer scale. This re-analysis illustrates the losses that have occurred in brook trout populations nationally. In Maryland, the new scale reveals that at the HUC 12 level (basically individual stream level), brook trout are extirpated in 72% of streams that supported brook trout historically, a higher number than from the initial analysis at the HUC 8 level (watershed size similar to the scale of the USGS topo map series) which estimated 57% extirpation.

Met with the town of Lonaconing representatives (Allegany Co.) to discuss maintenance of their water intake structure on Koontz Run following removal of the old instream pond and dam structures and subsequent re-creation of the stream channel. Due to debris collecting near the intake cistern, the recently restored stream channel and downstream existing brook trout population was not receiving the bypass coldwater that the structure was designed to provide. A regular maintenance schedule has been established and staff is optimistic that the issues have been resolved. Annual brook trout population monitoring above and below the restoration area was also completed.

Met with Western Region I staff and the Regional Operations Manager to compile, analyze, and report findings from the first year of northern pike sampling on Deep Creek Lake (Garrett County). The final report will be completed later this year.

Conducted an interview for the Outdoorsman Radio Show to discuss fall fishing opportunities in western Maryland.

Provided input on session topics for the upcoming Wild Trout Symposium as part of the program committee.

Investigated an anecdotal report by a local landowner of a brook trout population in a tributary to Jennings Run (Allegany County). Despite obvious acid-mine drainage issues, staff collected multiple size classes of brook trout, including a 9" adult.

Tidal Bass Program

Nearly 100 volunteers assisted in building 86 concrete reef balls at National Harbor. Many organizations collaborated in this effort. The reef balls will be used to provide structure and habitat for invertebrates and fishes in Smoots Bay. The balls will be deployed this fall. More information: dnr2.maryland.gov/fisheries/pages/smoots-bay.aspx.

The Maryland Aquatic Nuisance Species Plan was signed by Governor Hogan and will be reviewed for approval by the Aquatic Nuisance Species Task Force. A representative of the State will provide information regarding the Plan at the next meeting of the task force in November, when the Plan is expected to be approved. The approval of the Plan will allow Maryland to compete for federal dollars in achieving actions identified in the

Plan to prevent spread of aquatic invasive species and control existing aquatic invasive species.

The Black Bass Advisory Subcommittee met on September 13th to discuss and vote on a second method to improve black bass fishery management. This method was the implementation of catch-and-return or closed/no-target of bass areas and/or seasons. The subcommittee voted to eliminate this method from further consideration at this time. The subcommittee also reviewed current special conditions that provide standard guidelines by which tournaments should operate. The subcommittee recommended minor changes and voted to remove a stipulation requiring a 5-pound bass being retained in its own bag during the weigh-in process. The recommendations will be presented to the Sport Fisheries Advisory Commission in October and be considered by the Department for 2017. More information and minutes at: dnr2.maryland.gov/fisheries/Pages/mgmt-committees/bbas-index.aspx.

Received calls from anglers who reported catching tagged largemouth bass. The bass were tagged on the Potomac River in 2015 and 2016 as a part of a project to estimate population size and determine catch-and-release mortality for tidal Potomac River largemouth bass.

Completed black bass surveys of the North East River and Marshyhope Creek. The North East River has limited SAV beds, but those that were sampled were populated with bass. Adult bass preferred areas of hard structure like piers and stone rip-rap. One particular site that contained thick SAV yielded many juvenile bass. Overall, good numbers of adult and juvenile largemouth bass were found in Marshyhope Creek downstream of Federalsburg. Old ferry landings and drop-offs adjacent to spatterdock fields were most productive. Final survey results will be available when all field work is completed and the data is analyzed. Very special thanks to those who are helping Eastern Region complete their fieldwork!

Upcoming: Freshwater Fisheries staff will be conducting tidal black bass surveys in Gunpowder River, Saltpeter Creek, Dundee Creek, Swan Creek and upper Chesapeake Bay.