

Inland Fisheries Monthly Report – January 2015

Stock Assessment

Casselman River Watershed Brook Trout Restoration Project - Staff completed the Federal Aid report for this study. In 2007, the Youghiogheny River Watershed Association (YRWA) was awarded a grant by the Chesapeake Bay Trust to investigate and prioritize sub-watersheds within the Casselman River Watershed for potential AMD remediation and brook trout restoration. The YRWA hired Canaan Valley Institute to work collaboratively with MDE – Abandoned Mine Lands Division and DNR Inland Fisheries Service to complete these tasks. By 2014 a total of four alkaline producing limestone leach beds and eleven limestone sand dumping sites were established and operational in the watershed. Water quality data obtained by MDE showed an increase in pH and alkalinity downstream of all treatment sites. Three prioritized streams were monitored pre (2008) and post (2014) AMD treatment. Adult trout standing crops increased 2.8x in Little Laurel Run, 2.2x in Spiker Run, while remaining about the same in Big Laurel Run. Young of year (YOY) trout abundance showed an increase in all three streams. This project was helped by receiving a small grant from the Maryland Environmental Trust's *Keep Maryland Beautiful Program, Margaret Rosch Jones Award* given to the YRWA. The award was used for a summer student intern to assist in the field surveys and to conduct an educational presentation on the project at a YRWA public meeting in 2015.



Keep Maryland Beautiful grant recipient Kyle Klotz with a brook trout from Big Laurel Run, 2014.

Savage River Tailwater Trophy Trout Population Study – Staff completed the Federal Aid report for this study. The 2014 estimated adult trout density of 736/km (1,184/mile) met the management goal of 621/kn (1,000/mile). Brown trout continue to be the dominate salmonid species in the river comprising about 81% of the estimated adult density. Adult brook trout estimated densities continue to be low, accounting for only 12% of the estimated combined adult trout densities in 2014, with rainbow trout/cutthroat trout making up the remaining 7%. The maximum size brook trout was 305 mm (12 inches), meeting the Trophy Trout minimum size; while the maximum size

brown trout was 435 mm (17.1 inches), less than the Trophy Trout minimum size of 457 mm (18 inches). The 2014 year-class for both brook trout and brown trout were less than 50 YOY/km, indicating a very poor year-class for both species. During the critical trout egg/fry stage (October 2013 –May 2014), flows in the river exceeded 800 cfs on at least three events, with maximum flows reaching 5,000 cfs in May. Multiple and high magnitude flow events during this time period generally have negative impacts on YOY densities. In order to minimize high volume flow events from the Savage River Reservoir during the critical egg/fry stage, MD DNR, the United States Army Corps of Engineers, and the Upper Potomac River Commission met to discuss modifications to the reservoir refill strategy. The objectives are to minimize high volume flows events, capture sufficient volume of coldwater in the reservoir to sustain the trout population in the river throughout the critical summer period, and to minimize adverse impacts to the reservoir fishery caused by large fluctuations in water levels during the spring spawning season.



Jessica Klotz posing with a trophy brown trout from the Savage River Tailwater, 2014.

Youghiogheny River Catch and Return Trout Population Study – Staff completed the Federal Aid report. Trout standing crops, adult trout densities, and numbers of quality size trout in the Youghiogheny River C&R TFA have increased since catch and release regulations as well as minimum flow, dissolved oxygen augmentation, and coldwater temperature enhancement releases implemented at the Deep Creek Hydro-Station beginning in 1995. However, the mean trout density (401 trout/km) was less than the management objective of 621 trout/km, while the mean standing crop fell within the range of the management objective of 25 kg/ha in 2014. The density of quality size trout ≥ 305 mm was one of the highest recorded since surveys began in 1988. Species composition was 29 % brown trout and 70% rainbow trout in 2014. One brook trout was collected within the Hoyes Station. The maximum sized rainbow trout was 410 mm (16.1 inches) and the maximum sized brown trout was 600 mm (23.6 inches). The number of fingerling brown trout stocked in 2014 (9,200) was slightly less than the recommended number of 10,000; while the warmwater-strain rainbow trout fingerlings met the management objective of 10,000.



Garrett College students pose with a trophy brown trout from the Youghiogheny River C&R Area, 2014.

Conococheague Creek - The F-48 Federal Aid report progress report was completed. Conococheague Creek is a warmwater tributary to the Potomac River in Washington County that supports a popular smallmouth bass fishery. Population estimates for smallmouth bass and redbreast sunfish were obtained by conducting three pass depletion surveys at two locations. Because of the shallow and broad river profile, three barge-mounted electrofishing units and a large crew are required to complete the survey. Crews from Inland Fisheries Western Region I and II, Central Region, Eastern Region, APH hatchery staff, the Striped Bass program, and volunteers participated. An excellent population of smallmouth bass was documented. Abundance, biomass, and size distribution values approached levels reported for unexploited stream populations. Scales were removed from smallmouth bass to determine growth rates. Fishing mortality estimates derived from the growth and length at age data ranged from 2 to 6% suggesting that voluntary catch and release is very high and is helping to maintain this quality resource.

Potomac River Muskie Creel Diary Program – Work continued on the annual progress report for the nontidal Potomac River. Data provided by anglers participating in the voluntary Muskie Creel Diary Program are used to monitor the relative abundance and size distribution of the fishery. At present, fifteen fishermen submitted diaries. These anglers spent 2,839 hours to catch 212 muskie for a catch rate of 0.07 muskie per hour or 13.5 hours per fish. In 2013 it took 15.7 hours to catch a muskie. Although this would be low for most game fish, muskellunge are large, top predators that naturally occur at lower densities. The low density of muskellunge makes it very difficult to collect sufficient data using traditional survey methods and that is why the Muskie Creel Diary Program is such an important tool. Thirteen percent of the muskie reported in 2014 were ≥ 42 inches in length; all muskie reported were released.

Potomac River Smallmouth - Work continued on the annual progress report for the nontidal Potomac River. Smallmouth bass are the most popular sportfish in the Potomac River. The status of this population is monitored annual using seining to evaluate

yearclass strength and fall electrofishing to monitor adult fish stocks. As a result of repeated flooding during the spring spawning season, the 2014 yearclass was found to be very poor throughout the river, but showed some improvement in the western reaches. Yearclasses were also poor in 2009 and 2013. Electrofishing catch rates in 2014 fell slightly below the long term median values. The poor yearclass in 2009 resulted in fewer bass 12 – 15 inches in length available to anglers.

Potomac River Walleye - Walleye are an important sport fish in the nontidal Potomac River and are particularly popular with anglers during the late winter and early spring while other gamefish are not as active. To monitor and evaluate this fishery surveys are conducted below Dams 4 and 5 during the spring and throughout the river during the fall. During the spring survey, data is collected to determine the size distribution and obtain otoliths for age and growth estimates. This also provides an opportune time to collect brood for Manning Hatchery. Hatchery staff spawns these fish producing fingerlings used throughout the State, including the Potomac River, to supplement existing natural reproduction. Fingerlings stocked into the Potomac are marked with OTC (ox tetracycline) to be able to distinguish the stocked fish from those produced in the river. Poor river conditions in 2013 and 2014 reduced overall survival. However, 57% of fingerlings recovered in 2013 and 38% of the fingerlings recovered in 2014 were determined to be marked demonstrating that the hatchery fingerlings are contributing significantly to those yearclasses. Brood walleye will once again be collected during the spring of 2015 survey. The geometric mean catch of legal size walleye (15”) collected during the fall surveys was 13.2 fish per hour, indicative of a productive riverine population.



Beaver Creek – Beaver Creek one of the largest limestone streams in Maryland continues to support an excellent wild brown trout population. Despite a slight overall decline in record populations encountered in 2013, brown trout appear to be attracted to

the recent stream restoration efforts inhabiting areas previously unavailable. Historically brown trout numbers declined significantly in a downstream progression but are presently similar at all three electrofishing stations within the Catch and Return Area. Summer stream temperatures monitored annually showed favorable conditions for trout survival downstream of established survey sites. Additional electrofishing surveys documented wild trout populations approximately 9km downstream of the Catch and Return Area.

Hunting Creek - Hunting Creek is one of Maryland's most popular and historic trout resources. Consecutive years of poor recruitment had led to declining wild brown trout abundance throughout Hunting Creek, upstream of Cunningham Falls Reservoir as well as in the tailwater. Strong recruitment and survival in 2012 and 2013 have dramatically increased adult brown trout populations within the tailwater in 2014, at or near the long term geometric mean at all stations. Unfortunately the same can not be said for brook trout populations within the headwaters. Only seven adults and one YOY were collected.

Habitat and Water Quality

Maryland Marcellus Coalition

Western Region I staff collected water quality samples from streams within the Bear Creek, North Branch Potomac River, and Block Run Watersheds. We obtain monthly water quality data on these streams for baseline conditions prior to any potential Marcellus gas drilling.

Land Stewardship Committee

Western Region I Manager Alan Klotz reviewed the following potential land acquisitions:

- Attended field review of the Little Orleans Campground with the Western Region Land Stewardship Committee. The Little Orleans Campground is adjacent to Green Ridge State Forest and shares a border on three sides, and borders Fifteen Mile Creek. This property contains several tent camping sites, many RV sites, two (2) swimming pools and a camp store. Potential acquisition to be determined at a later date.

Environmental Review

Provided comments to the Environmental Review Unit or other agencies regarding:

- The Wildlife and Heritage Service proposal to raze an old cabin located on Warrior Mt Wildlife Management Area. Fisheries Service had no concerns.
- Allegany County of Public Works regarding stream restoration project in the mainstem of Georges Creek.
- Time of year waiver request on an emergency road repair along an unnamed tributary of Jennings Run near Frostburg. Brook trout were collected downstream of this site, and concerns were raised regarding sediment inputs resulting from the project. The Allegany County Department of Public Works notified Fisheries Service biologists when the construction began, and we met with the engineer on-site in order to make sure sediment inputs were minimized.

- Integrated Policy and Review Unit regarding powerline right-of-way vegetation control within the Savage River State Forest, Youghiogheny River Wild and Scenic Corridor, and Mt. Nebo Wildlife Management Area. Recommendations were made not to allow herbicide treatment within 100 feet on either side of a stream or wetland, no herbicide allowed within the Youghiogheny River Wild and Scenic Corridor (manual removal only), and no herbicide use within the Mt Nebo Wildlife Management Area as DNR staff will manage the ROW as wildlife habitat using mowers.

Piney Run - Central Region staff Mark Staley and Adam Eshleman attended a meeting at the USFWS office in Annapolis to review stream restoration plans for an unnamed tributary of Piney Run in Carroll County. Over six miles of stream will be restored when the project is completed.

Fish Health

Staff investigated the gill lice issue in brook trout. Several northern states have reported increasing gill lice infestations and impacts on brook trout populations, and an infestation has been recently reported for a brook trout population in North Carolina. Staff continues to work on a fact sheet and sampling protocol that will be provided to Inland staff that conduct brook trout monitoring work.

Outreach

Gunpowder Falls Tailwater - Central Region Inland Fisheries Manager Mark Staley answered inland fisheries management questions and provided his annual PowerPoint presentation on the “State of the Gunpowder Falls Tailwater” to the Maryland Chapter of Trout Unlimited (TU) in Towson, MD.

First Aid/CPR Certification - Josh Henesy provided a First Aid/CPR recertification class for Fisheries staff during the 2015 Summit at New Germany State Park. Josh has provided this important training not only for Fisheries staff, but for all Agency staff as well and he is currently the only instructor providing this training in the DNR. Since this program began, several Department staff have had the opportunity to put their training to use in potentially life saving situations. Josh was honored at the Summit for the many hours he devotes to provide this professional training.

Southern Region staff took the opportunity to renew their First Aid/CPR training with Western II Inland Biologist Josh Hennessy at the recent Fisheries Summit.

Information on walleye and muskie fishing opportunities in the Potomac River and wild trout resources in Washington and Frederick County were provided for inclusion in Alan Ellis’s annual hunting publication.

Responded to numerous anglers inquires regarding ice-fishing opportunities on Deep Creek Lake, Piney Reservoir, and Savage River Reservoir.

Angler Access

Beaver Creek - John Mullican met with a Washington County landowner that provides fishing access to the Beaver Creek Fly-Fishing-Only, Catch-and-Return Area to discuss the possibility of providing a permanent access easement for fishermen. Although landowners graciously allow fishing access currently, permanent easements would secure such access in the future.

Morgan Run - Central Region Manager Mark Staley met with representatives from Patapsco Valley TU and other DNR staff to discuss a proposal to restore the handicapped angler fishing platform at Morgan Run Natural Resource Management Area in Carroll County.

Invasive Species

Potomac River Flathead Catfish - During the fall Potomac River electrofishing surveys, fourteen adult flathead catfish were collected and retained. Flathead catfish were collected at all sampling sites from Williamsport downstream to Dargan. To understand how these invasive predatory catfish may impact the ecology of the river, staff has begun to collect basic life history data from all captured flatheads. Otoliths are being extracted and prepared to obtain length at age and growth data. In addition, stomach contents are examined to document diet in the Potomac River. A more extensive evaluation of both the channel catfish fishery and the flathead population is planned for the summer of 2015.



Blue catfish tournament - Coastal Conservation Association (CCA) contacted MD DNR to assist with a blue catfish tournament to be held on the Potomac River during March 2015. The group aims to help recent efforts to reduce the population of these invasive fish and limit their spread, while providing a competitive recreational opportunity for anglers.

The Outdoorsman Radio Show - Southern Region Manager Mary Groves was a guest on The Outdoorsman Radio Show, hosted by Allan Ellis. The focus of the show was

invasive catfishes, specifically blue and flathead catfishes. Management of these species and their recent spread and range increases were discussed.

Invasive Species (*Didymo concern*) - Susan Rivers presented a PowerPoint program to the Mid Atlantic Council of TU on invasive species that can impact Inland waters. The Council wanted to hear about efforts regarding the invasive species *Didymo* (*Didymosphenia geminata*) and the wader wash stations established on key streams across the state. They were concerned because anglers find wash stations that have not been maintained, are damaged, and whether they have had any impact on containing the spread of the algae. Susan reported that it is difficult to rate the success of the stations since they were installed right after the first occurrence of the species and the species came on the radar of staff at the same time. In reality, the algae may have been present in some streams and simply had not been identified. She also told them that many cooperators were interested in helping in the beginning but help from volunteers and other DNR staff has waned. The Inland staff is stretched thin and it is difficult to check and maintain these stations on a routine basis. The Council is going to discuss the issue and will send a letter to Susan to be shared with the Invasive Species Matrix Team on ideas and cooperative suggestions for the stations.

Stocking and Population Management

Walleye - Western Region II fish stocking request for the Inland hatchery program was compiled. Staff will be collecting brood walleye from the Potomac River in February/March to produce fry/fingerlings to fulfill State requests. A total of 40,000 fingerlings were requested for the Potomac River to supplement existing natural reproduction and maintain the quality sport fishery. The fingerlings will be marked with OTC so they can be distinguished from naturally produced fish during future surveys and their contribution to the fishery evaluated.

Brook Trout Program

Alan Heft gave a presentation entitled “Maryland’s Native Brook Trout: the ‘Canary in the Coal Mine’ for Climate Warming?” at the *Monitoring for Climate Change in Maryland’s Non-Tidal Streams* workshop. The workshop was sponsored by the Maryland Water Monitoring Council and was hosted at the USFWS Visitor Center in Laurel, Maryland. A variety of presenters provided information on future sampling and monitoring needs and designs to develop strategies and mitigation plans for climate change. Presentation abstracts from the meeting are available on the MWMC webpage at http://mddnr.chesapeakebay.net/MWMC/MWMC2010/pdfs/conferences/2014/ClimateChangeWorkshop/Presentation_Abstracts.pdf

Staff preformed a field visit to a road repair site on Jennings Run in Allegany County; the County had requested a waiver to the closure period for an emergency repair. Comments were provided and another field visit was done with Western Regional Manager Alan Klotz to discuss the work with the County engineer. A native Brook trout population occurs downstream of the work site, requirements to minimize disturbance and sediment input at the work site were included in the waiver.

Staff met with Dr. Hilderbrand at UMCES AL to discuss plans for two SWG proposals for the coming year. It was agreed that we will submit two proposals for brook trout genetics work and creel survey work.

Staff is partnering with Savage River Forest Service and Garrett College staff to develop and implement a water quality monitoring sampling regime for three tributaries that will be impacted by the new St. John's Rock ORV trail in Garrett County. Staff was able to obtain field turbidity meters through the cooperation of MBSS staff that will be used by Forest Service Staff for point source monitoring the next several years.

Staff investigated the gill lice issue in brook trout. Several northern states have reported increasing gill lice infestations and impacts on brook trout populations, and an infestation has been recently reported for a brook trout population in North Carolina. Staff continues to work on a fact sheet and sampling protocol that will be provided to Inland staff that conduct brook trout monitoring work.

Staff met with TU member and upper Gunpowder project leader Scott Scarfone to discuss data collection and coordination for the proposed project.

Staff continued working with University of Maryland staff on reports for both circle hook studies conducted in the spring. Final manuscripts are expected by late spring.

Staff worked with Frostburg State student Ryan Cooper on developing a brook trout angling tool designed to highlight our best fishing opportunities in Maryland. All survey data collected since 1980 statewide was compiled into a dataset and classified based on the average number of brook trout per mile per individual stream. The top 25% were given a "Gold Medal" ranking, the middle 50% "Silver", and the bottom 25% were assigned a "Bronze" ranking. These streams were then mapped as a final product.

Staff biologist Matt Sell has continued the Northern Pike tagging project on Deep Creek Lake through the ice. There have been 5 'new' pike tagged in as many trips, as well as scales collected from all fish caught for aging. Some of these fish are of impressive size. Since the initiation of the project in the fall of 2014, 26 pike have been tagged via hook and line collection over the majority of the 3900 acre impoundment. Remarkably, in the first few weeks of ice fishing, anglers have reported catching 3 of these tagged fish - all of which were harvested. Anecdotal reports are also suggesting a very high harvest ratio on not only large fish, but on most pike angled through the ice.

Staff met with Western Region II manager, John Mullican, to assign ages to pike scales collected during the tagging project. The scales were, at best, hard to age, but we came close to agreeing on most of them. This work will continue in an attempt to understand age and size structures for pike in Deep Creek Lake.

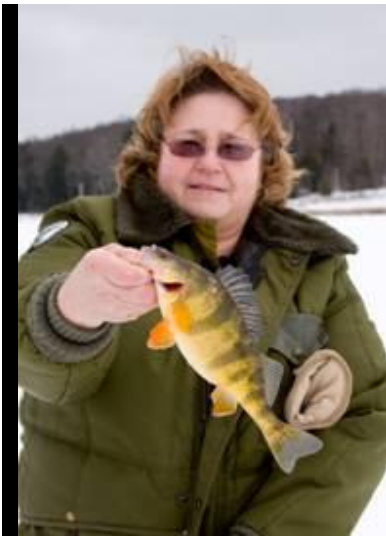
Staff compiled a summary of work completed in 2014 for contribution to the coldwater federal aid grant report.

Staff discussed tablet data collection options with fisheries staff from Arizona. They were interested in the work we had done and how it would apply to their creel survey collection.

Staff discussed brook trout radio telemetry with TU members from Virginia who are interested in tracking brook trout there. Restoration work had been done on Beaver Creek, a freestone stream with spring influences, which cooled the summer water temps to within the tolerance range for brook trout. They are interested in tracking fish to determine if they over-summer in the main stem of Beaver Creek, or if they migrate to colder water sources. Advice on tag models, sizes, costs, etc. was provided.

Staff assisted Western Region II staff with the setup of their iPad that will be used for data collection during 2015.

Staff attended the annual Fisheries Service retreat at New Germany State Park. Matt Sell gave a presentation on using an iPad for in the field data collection, a method that was successfully tested during the summer of 2014 by Brook Trout program staff. Matt Sell with assistance from Ken Wampler of the Western Region also hosted an ice fishing event at Piney Reservoir and Deep Creek Lake.



Other

Angler Preference Survey - Inland staff members Susan Rivers, Charles Gougeon, Joe Love and John Mullican have been working with staff economist Scott Knoche to develop an angler preference survey to be administered in 2016. The survey will query angler usage, demographics, economics and key fishing areas on the Potomac and for trout. Some questions in this survey will duplicate questions from a 2004 survey to compare changes in responses over the past 10+ years.

GIFS Database - Progress continues to be made on the newest version of our online database, GIFS. Ross Williams and Laura Bowne continue to work together to improve and streamline the system. Notable updates are the addition of a 'Site ID Label', which enables the user to identify the site associated with each tab, the addition of a means to search sites by watershed, and updates to the species list.

Southern Region biologist Ross Williams queried the new-and-improved, online GIFS database for Northern Snakehead catch data collected during the 2014 field season.

Fisheries Tech Kenny Wampler and Fisheries Biologist Jody Johnson spent considerable man-hours entering data into the GIFS database.

Earleville WMA - Eastern Region staff is coordinating with Wildlife and Heritage's Central Region with their planned house-raising project at Earleville WMA. The older house was once used as the Eastern Regional Inland Fisheries Office, and there is a large six bay storage building on site owned by Fisheries Service. Eastern Region recently paid to have the electrical service meter moved to an alternate location so service could be provided to the storage building after demolition.

Winter Trawl Survey - Eastern Region staff assisted with the winter trawl survey conducted on the Chester River by the Bay Resident Species Project. Assisting other units is beneficial since Regional Staff are regularly asked to provide comments on proposed projects in tidal areas through Environmental Review.

Eastern Region staff is assisting Hatchery staff with a variety of projects, including the repair of a fiberglass hauling tank, fish disease certification, repair of overhead lights, and the re-building of a water pump.

Regional staff continued working on the Federal Aid progress reports.

Jamaican Honeymoon - Todd Heerd swam with the fishes and dolphins in Jamaica.

