SD AFS - Trout Committee meeting - Asheville NC - 2/18/2025 (28 in attendance)

The 2025 meeting of the Southern Division of the American Fisheries Society Trout Committee was called to order by present Chair Brad Fink 9 a.m. Eastern time.

Welcome and housekeeping announcements were shared. Jake Rash was thanked for organizing the meeting room and his efforts in assisting with planning.

Dr. Kyle Hartman shared a pressing update from ExCom SDAFS, that each committee needs a rep at the ExCom meeting, and he confirmed the Trout Committee report had been received. He further announced that there was a Bylaw meeting tomorrow afternoon (Dr. Hartman is the incoming VP for SDAFS). He also proposed a standing question to the committee: "what the ExCom can do for the Trout committee?" Brad Fink suggested that it seemed several committees are struggling with student scholarship/award applications and how to proceed and suggested the ExCom might be able to help provide some guidance on the topic.

Old business:

Approval of 2025 Minutes:

The 2025 minutes were sent to committee members via email. The minutes included round table reports from state agencies. Jake Rash motioned to approve old minutes– Jim Habera seconded. Passed unanimously, no discussion.

Treasurer's Report:

Christy Graham presented a summary of the latest treasury report, which included updated information since the last report, directly following the meeting at Pipestem State Park on May 7th, 2024.

Treasury Report, February 18, 2025
SDAFS Trout Committee Meeting

Balance on Hand (March 30, 2023):	**$5,912.90**
Income	
Pipestem Registration (Paid in Advance; 5 @ $65.00)	$325.00
Pipestem Registration (Paid at Meeting; 14@ $65.00)	$910.00
SDAFS 2024 (Re-Deposit Cash for Meeting Registration)	$200.00
Total Income:	**$1,435.00**
Expenses	
Ruritan Club (SDAFS 2023 Facility Rental Fee)	$100.00
John Hammonds (SDAFS 2023- Food Reimbursement)	$225.39
SDAFS 2024 (Withdraw Cash for Meeting Registration)	$200.00
Pipestem Resort State Park (SDAFS 2024 Facility Rental Fee)	$960.00

Total Expenses:	**$1,485.39**
Balance on Hand (February 18, 2025):	**$5,862.51**

David Thorne motioned to approve the treasurer's report- Matt Lawrence seconded the motion, No discussion, passed unanimously

Membership list update:

Present Chair Brad Fink, assisted by Jim Habera, provided an overview of the Committee structure and expected participation for the group. Essentially, each state fish management agency (In the Southern Division AFS geography) and several federal agencies (USFWS, NPS, etc.) are asked to participate in the committee. Participants must be a member of the parent society to be a voting member of a technical committee.

Trout Committee Website: Jim Habera updated website with all new material that was sent to him. The Trout Committee is looking for a new webmaster, Jim has served in this capacity for many years. He has done a remarkable job and the Committee is grateful for his continued dedicated service to the Committee. Main duties include updating minutes, pictures, etc. If anyone has experience with WordPress that would be great. Jim will help train anyone who is interested. If you haven't been on the website, please go check it out. The website is a great resource for new members and veteran members. A favorite resource is the archive of photos and proceedings and meeting minutes. It is a great resource for anyone interested in the Trout Committee and its activities.

Brook Trout Subcommittee Update: Jim Habera has collected information on BKT resources for all the different states, who submitted contributions. He is still waiting on a couple states to contribute. There was some discussion about how no one has had much time to lead the effort and in the end Jake Rash volunteered to take on the lead role for the subcommittee.

Jim gave a rundown on the goals and history of the subcommittee. There was significant energy initially, but it has waned and it is time again to update the information. The process typically includes an effort to survey all states on what the BKT resources look like in each state across the range. Including any new genetics info. Historically the committee published that info as a position statement for the SDAFS trout committee on BKT management. Jake Rash added that this brings all the states and agencies together on management of the species.

We are looking forward to the update for this material.

Micro Fish update:

Jack Van Deventer provided an update on the status and future plans for MicroFish.

MicroFish is now used in 109 countries. Before it came out the MicroFish program was a very complicated dashboard. In 2005, there was a meeting and fisheries managers met and it was funded by a AFS grant in Salt Lake City. They decided that they need to be able to share data and

work together. Jack was a professor at Washington state. The technology didn't exist at the time, so Jack wanted to create a system to would allow for the sharing that was being mandated. It would accept all types of fisheries sampling data (fishing, shock, snorkel, gillnetting, etc.), but it had some accessibility issues, so the data needed to be entered with or without location and biologist data.

The mission of Microfish is to prevent the need for everyone to become a programmer.

Microfish 5 is going to happen, going to strip off all the overhead from Microfish 4. Microfish 5 will be 100% in excel. It has to be easy to use. Jack is adding Zippin technology and some more fisheries estimators, condition factors. Jack states "I'm stealing all the thunder from Microfish 4 and if you bought Microfish 4 you can get Microfish 5 for free". It's going to have an excel add-in. You should be able to add it to excel as an add-in and bypass any accessibility issues from IT departments.

Last year Jack spoke at the Chattanooga SDAFS and it went well. From that meeting there was lots of feedback and it was a good troubleshooting session too. Microfish 5 is expected to be available this summer. Jack is going to do a video demo on YouTube so we can get the first crack at it and provide feedback too. He can send it to people to Beta test as well, but you need to contact him about that.

In summary: MicroFish Update (Jack Van Deventer) – While MicroFish freeware downloads have slowed somewhat in the US, the international downloads continue steady. MicroFish is now in all 50 states and is in 109 countries. This past year Jack delivered workshops entitled, "Microsoft Excel for Fisheries Professionals" at SD AFS meetings in Chattanooga (2024) and Asheville (2025), and for Virginia DWR biologists in Blacksburg earlier this year. Work continues on MicroFish 5.0 and on a YouTube channel: "Technology for Fisheries Biologists".

Student Scholarship Update:

Brad sent out procedural document and a draft application for the scholarship. To the Trout committee ExCom and after edits to the committee membership. Once the committee approves the documents we will seek investments from state chapters other committees.

Based on past experiences and discussions the fund needs approximately 10K to earn enough interest to fund the scholarship in perpetuity without drawing down the principal.

Kyle Hartman- Any funding request from the ExCom needs to be made at ExCom meeting.

Brad and Christy described examples of how state chapters have funded similar scholarships. AR AFS has easily funded the scholarship with 10K invested. Brad mentioned that the committee has previously talked about registration at our committee meetings to build the scholarship fund.

Dave Thorne – Called out timeline conflict of the application period. Need to adjust dates to get alignment and ample amount of time to advertise. Dates will be changed to Sept 1 (advertise)vand Dec 1st (application due).

Christy Graham– should we designate Panel of at least 3 committee members - Past Chair, Treasurer, Chair elect? Discussion about how many members should be on the voting on applications ensued. No decision was presented.

Discussion on intended purpose of the scholarship – Matt L – The intention is that the funds would be used to travel to the trout committee meeting and present at that meeting.

Dave Thorne – How are we going to solicit applicants, is there a list of schools? Chapters? Further discussion needed to clarify that the recipient will present at the meeting.

Seth Coffman: Do we need a statement of intent for the purpose of the scholarship? Would like to see an additional sentence to promote the scholarship.

Brad Fink: documents will be sent around and shared later and approved through online voting.

Jim Habera: Recommended naming the scholarship after Monty Seahorn.

Kyle Hartman: Discussion on timing of payment, reimbursement? Maybe we should reconsider when and how to award the funds. They will receive the award at the meeting in person. When we meet with SDAFS we will need to process this faster to give ample time for applicants to receive funds and still register.

Brad Fink volunteered to continue to lead this effort and more discussion followed after lunch

Brad Fink proposed allocating 500$ 2026 and 2027 out of our count now and then plan on using some proceeds to from East Coast

Matt Lawrence motioned to approve $500 to for 2026 - Dave Thorne seconded.

Christy Graham asked a question that generated some more discussion about how to allocate the funds. What if they don't need the full $500. Group decided that going with a flat $500 instead of a sliding amount based on the need.

Dave Thorne shared other travel awards require justification of need and recommends adding that to this one if it isn't already in there. General discussion about various situations that would impact justification for traveling to the meeting.

After discussion ended the body voted and the motion passed unanimously

New Business:

Election of Officers:

Christy is willing to remain Treasurer. No vote required running unopposed

Chair Elect: Struggled to get nominations, John Lee Thomson Nominated James Miles (GA DNR), Seth Coffman – seconded – No discussion, motion passed unanimously. Congratulation James!

Brad Fink presented some discussion on soliciting nominations for officers prior to the annual meeting. The past chair will send out solicitation for nominations. Could be discussed during other official business discussions (scholarships). That person should be soliciting nominations by Jan 31st or 45 days prior to the meeting.

Brad proposed the question "who is responsible for updating procedural manual?" Answered All ExCom members

Meeting location for 2026:

After a short discussion the meeting location for the 2026 Trout Committee Meeting will Arkansas. Christy Graham volunteered to help plan the meeting with the current chair.

Date: Proposed Week of May 18th . This will confirmed later

Theme: East Coast Discussion will happen here, but if there's another there send it to Brad, Tyler, James.

Workshop and Trainings:

The body had general discussion on ideas for desired workshops and trainings.

Brad Fink suggested "How do floods effect wild trout populations".

Dave Thorne: suggested eDNA and other new technology- WV, GA uses it for detecting presence. VA has used it previously. eDNA, its been long enough since last workshop that it could be useful to do this topic again with updated technology. Protocol development for states? Brad Fink will follow up about presenters.

Jake: there's lots of work going on with eDNA, they are starting to develop a standard practice for non-genetics folks and tips and tricks. Things to consider when setting up a project. There is a USGS group, but need to track down the contact info. If interested in more details reach out to Jake Rash.

Nadia (NCWRC) – Would be willing to chip in to present, Heather Evans (NCWRC) also might be interested. This could be virtual presentations on suggested study designs, general considerations

It would be helpful to get an idea of what questions folks are trying to answer.

Jake Rash: Eastern Brook Trout Joint Venture is trying to revamp their "lunch and Learn" series. This could be a possibility for a venue.

<u>Additional future training needs ideas:</u>

James Miles – Matt Culp and Antimycin could be a topic for future workshop.

Jake Rash and Tyler Hern mentioned that YY males for use as a fishery management tool could be another topic idea.

Break 10:25-10:40

East Coast Trout:

Will be held at Canaan Valley Resort, WV.

Date details to follow – May and June are a really popular time. Currently dates are available, but we should act as soon as possible.

No costs are currently known.

Jake Rash presented a rundown of East Coast Trout for new folks. East Coast trout is held every 3-5 years and is our response to Wild Trout meeting in West Yellowstone. The objective is to get hatchery and wild trout folks in the same room. East Coast is for all trout, production and wild trout management.

Brad Fink: should we go ahead and pick some target date?

Dave Thorne: June 8th-10th – Note the Appalachian Flyfishing Festival will be held in Thomas, WV the previous weekend.

Committee is OK with the dates, Dave Thorne is going to Follow up with Resort to lock in the dates.

Cost for meeting was last time was ~$125 for professionals.

Christy Graham: We need to consider having some capital to facilitate meeting costs. Registration will offset some of the costs, but you need some cash upfront. There are ways we can reduce costs – program printing, food, etc..

Brad Fink: Were going to need several volunteers to help with the planning of this meeting. So far Dave, Brad, Jake are the planning committee.

Seth Coffman volunteered to help with planning.

Fundraising ideas were shared. Silent auction, deck of cards game?, funds could be used to boost scholarship fund? Would be a good idea to reach out to companies, Dominion energy, other companies for sponsors. TU, Simms, Orvis, etc.

General discussion ensued about "How many presenting rooms do we need?" Committee decided to confirm later when we know approximately how many presenters to expect. Historically, we only had one room, but there have been times when we split into hatchery and management.

Once the dates are finalized the next step is to start to advertise the meeting to our colleagues.

Christy Graham made motion to adjourn, Jim Habera seconded – meeting adjourned 3:22pm

States Round Tables

ARKANSAS

Submitted by Christy Graham - Arkansas Game and Fish Commission (AGFC)

Population monitoring – The AGFC Trout Management Program (TMP) conducts electrofishing surveys every year on the year-round trout waters. In 2024, the TMP conducted annual monitoring on four tailwaters, Spring River, Dry Run Creek, and Collins Creek. However, all populations surveyed looked to be in good condition, both number and size wise. If you are interested in detailed results of AGFC's annual monitoring efforts, annual reports are available on AGFC's website (click here).

Creel surveys – The TMP completed a creel survey on Beaver Tailwater in northwest Arkansas in August 2024. The creel survey report is nearly completed and will be available soon. The TMP initiated a creel survey of Spring River in September 2024 which will be completed in August 2025 and will initiate a creel survey of Greers Ferry Tailwater early next year.

University of Arkansas at Pine Bluff research – Over the past 5-6 years, the AGFC partnered with University of Arkansas Pine Bluff (UAPB) to conduct several studies of Brown Trout on the Greers Ferry Tailwater. Personnel evaluated redd characteristics, spawning time-frame, habitat use, growth, and movement. AGFC referred to those studies as 'Phase I' of the research. "Phase II" of projects started in December 2023 and entailed studying Brown Trout movement using radio telemetry, as well as examining shifts in fish assemblages downstream of the managed portion of Greers Ferry Tailwater (i.e., Lower Little Red River; LRR). Phase II projects were completed in Fall 2024 and personnel are working to finalize the reports.

In fall 2024, the TMP and UAPB launched a one-year study of Brown Trout diets on the Greers Ferry Tailwater. Project personnel will collect stomach contents seasonally and macroinvertebrates and sculpins monthly throughout the project. Project objectives include investigating Brown Trout's utilization of sculpin as prey, determining level of competition for forage between trout and sculpin, and estimating food availability in the tailwater.

In fall 2024, the TMP and UAPB also launched a multi-year study of Brown Trout on the Bull Shoals Tailwater (White River). The project will help us estimate Brown Trout growth, survival, and where/how far they move within that portion of the tailwater. During the study, we will collect Brown Trout seasonally (every 3-4 months) throughout the project area. For each fish, we will measure its length and weight, implant a Passive Integrated Transponder (PIT tag), and clip the adipose fin (small fin behind the dorsal fin). To acquire information on movements of individuals, Brown Trout will be implanted with radio tags in fall 2025.

Revisiting the statewide plan – In 2024, AGFC finalized the 2025-2034 statewide trout management plan. The plan was developed with input from both stakeholder and technical advisory committees. The TMP conducted three stakeholder advisory committee meetings to solicit input to identify the key areas for the plan, issues and values for each key area, and input for formulating goals for each area. The TMP drafted the introductory material and goals for the plan, and specific objectives and strategies with the technical advisory committee at a retreat in June. The plan is available on the AGFC website (click here).

GEORGIA

Submitted by James Myles – Georgia Department of Natural Resources (GADNR)

Wild Trout:

Currently expanding our standardized trout sampling priorities to add additional rainbow and brown trout streams, along with geographical areas that were not normally sampled (Cohutta Wilderness).

Brook Trout Barriers Assessment

- Continue updating our database for manmade and natural barriers located in Georgia for use of possible BKT restorations in the future.
- For natural/man-made barriers created in the past (Log-Weirs), we are assessing the conditions of such barriers and checking their effectiveness for preventing non-native trout encroachment.
    - Ex. Coleman River Log Weir (Meeting with USFS to discuss future actions to repair/rebuild existing structure and starting a non-native trout tagging study to determine structure effectiveness).

Non-native Trout Removals on Brook Trout Streams

- Single-pass electrofishing removals was completed on 5 brook trout streams across the state that resulted in the removal of 155 rainbow trout.
- Plans are to continue these removals this spring while also collecting some to be tagged for our barrier effectiveness study.

Wild Trout Fishing Pressure Camera Project

- Our wild trout fishing pressure camera project has continued to be very insightful on the amount of fishing pressure our wild trout streams face. When comparing our higher pressured streams (Ex. Chattahoochee Headwaters) to our standardized sampling data, we see some shifts in population densities (*which could be caused by variety of other factors*) but overall health condition of these populations has stayed the same.
    - We will continue to use this project to help us monitor our wild trout streams and hope to expand this project to other streams over time.

Question for the group:

Georgia has a select number of smaller (3-5 m wide) wild brown trout streams scattered across the North Georgia Mountains. Within these streams, we see on average a Fulton's condition factor of 0.8-0.9. **Do other states see a similar pattern of lower Kn values in their smaller brown trout streams?**

Yes, similar findings found in other states

Hatchery Production/Stocking:

- Historically we stock 1 million 10” trout each year for put and take management of public trout waters. Last year our numbers were down, we only stocked 850,000 but heard no complaints from our anglers. This was due to quality fish. Our 10” were closer to 10.5” and our 12” (big fish program20,00-30,000 annually) went to 14”. This aligned with the results from our 2017 angler survey. Most anglers responded catch fewer quality trout was preferred over numbers.

Others:

- Trout Slam Updates (Since the start in 2023, we’ve had over 400 anglers complete their slam in GA)
- Georgia’s trout map is currently being updated and have plans to be reprinted this year for the public.
- Toccoa Tailwater Creel Survey Updates (2022-2024)
    - We received 283 creel survey responses from 2022-2024
    - Average catch rate was 2.3 fish per hour with most of our anglers being wading fly anglers within the age range of 21-49 years old.
    - We plan to continue this survey to help inform our management decisions on the Toccoa River Tailwater

NATIONAL PARK SERVICE

Submitted by Matt Kulp – National Park Service

Great Smoky Mountain National Park (GRSM) 2024 Fisheries Highlights
18 February 2025

Project Updates

1. Antimycin Re-Registration
    1) USGS bought intellectual property rights and is working on re-registration.
    2) Successfully revived strain; now working on QA/QC procedures and large-scale production
    3) Changing formulation to remove acetone and replace with stable compound.
    4) Goal to submit reregistration packet to EPA in 2025; 2026 production.
    5) Awaiting approval of "experimental use" for Moore Springs Br. for Sept 2025

2. Moore Springs Branch (NC) Brook Trout Restoration (3.8km) (Twentymile Creek watershed)
    1) Pre-treatment fish population monitoring in 3 sites in 2022, 2023, 2024, 2025.
    2) 8-12 Sept 2025 antimycin treatment (NCWRC, NC TU assistance)
        i. USGS scientists will participate to observe and do instream detection assays.
        ii. Great training opportunity for partner staff
    3) Will translocate 600 Brook Trout per year for two years from 3-4 Little TN River watershed source stocks.

    ** TOTAL 19 streams and 36.7 miles of Brook Trout water restored to date*

3. 2024 GRSM Trout Distribution Surveys
    1) Completed trout distribution surveys in Redman and Stilwell Creeks (NC)
    2) Trout distribution surveys completed in 83% of park to date
        i. Goal to complete 3% in 2025 (Noland Creek, Hazel Creek, others)
    a. Interesting Distribution Facts:
        ii. Distribution completed in 2,245 of 2,705 miles (83% surveyed)
            1. *565 miles have trout (25%)*; 1,681 miles contain no trout (75%)
            2. Trout occupy 11% of 1st, 27% of 2nd, 55% of 3rd, 63% of 4th, 77% of 5th
                a. Brook occupy 241 miles (43%); 238 stream segments
                b. Brown occupy 133 miles (24%)
                c. Rainbow occupy 418 miles (74%)
    3) Kulp et al. (2025) found Allo BKT mean pop segment length 1,641m (27-17,845m)

i. Symp BKT-RBT mean pop segment 2,419m (65-17,561m)
ii. Longest pop segment BNT-RBT 13,418 (36-49,640m)

4) Fausch *et al.* 2024 found Japanese charr mean 94-375m

4. Trout Population Long-Term Monitoring Results
    1) GRSM Brook Trout population monitoring summary stats (7-34 years of data)
        i. BKT presence increases above 850m (2,800 feet); most pops 2,800-5,500 ft
        ii. Stream temps appear stable across most Vital Signs sites
        iii. Biomass and K significantly lower in acidified streams (303d)
        iv. Among VS and Legacy allopatric Brook Trout 3-pass sites, there has been 'no trend' in 94% of young-of-year (YOY); allo. Adult BKT no trend in 55%, however 39% decreased (71% of sites source stocks)
            1. Aden Branch (212 over 14 yrs), Bunches Creek (1,462 over 17 yrs), Deep Creek (235 over 5 yrs), Flat Creek (739 over 14 yrs), Kanati Fork (250 over 14 yrs)
        v. Majority (>75%) of YOY and adult pops stable across all other sympatric groups
    2) Shenandoah NP Brook Trout pops have declined >50% in 2/3 of streams in last 25 years!
        i. Most pops in basaltic and granitic watersheds exhibited sharp declines
        ii. Siliciclastic (sandstone) streams with larger watersheds had estimated increases in adult BKT abundance of 2x-5x
        iii. Siliciclastic streams (sandstone) showing signs of improving water quality.
        iv. Stream >1,700 feet have been stable over this period; most streams <2,500'.
        v. Summarized in "*Strong variation in Brook Trout trends across geology, elevation, and stream size in Shenandoah National Park*" in TAFS.

5. Brook Trout Genetics TN Pops Completion
    1) Sampled remaining 9 TN pops with microsatellites
    2) UT Ben Fitzpatrick and Rebecca Smith running analysis (USGS overhead too high)

For more information on any of these projects, please contact Matt Kulp (865) 436-1254 or Mat_Kulp@nps.gov

KENTUCKY

Submitted by Nathan Hayes – Kentucky Department of Fish and Wildlife Resources

Cumberland Tailwaters

- Improvement of Brown Trout in the tailwaters since the drawdown from 2007-2013. At this time, we can only speculate about the improvements (possibly an increase in aquatic vegetation in the last few years)
- Ceasing Cutthroat stockings (never saw them in samples and not many accounts from anglers)
- The oxygen injection system on the lakeside will be completed late this year or early 2026. This will improve the water quality of the hatchery and help them avoid using the sluice gates in late summer.
- Installing bridge support piers in the tailwater for the new 127 bridge to reroute traffic from the Wolfe Creek Dam. There will be a lot of moving of fill dirt into and out of the river. Possibly impact the trout only time will tell.

Red River Gorge

- 2025 will be the last Brook Trout stocking in Parched Corn Creek

Wolfe Creek Fish Hatchery

- Production Capacity
  - **Rainbow Trout**
    20,550 lbs. - 15,000 fish at 15 inches
    8,500 lbs. - 12,325 fish at 12 inches
    49,300 lbs. - 120,750 fish at 10 inches
    152,000 lbs. - 483,600 fish at 9 inches
    Brown Trout
    8,300 lbs. - 12,000 fish at 12 inches
    11,925 lbs. - 57,150 fish at 8 inches

    Brook Trout
    4,600 lbs. - 15,000 fish at 9 inches
    4 lbs. - 300 fish at 3 inches

General

- Starting to develop a statewide Trout Angler Survey
- Standardize Angler Utilization Survey Protocol using cameras.
- Updated Stream Ranking classification

MARYLAND

Submitted by Matt Lawrence – Maryland Department of Natural Resources

2024 Survey Activities

Maryland conducted 151 coldwater fisheries surveys in 2024. Depletion methods were used at 64 survey stations to estimate population abundance. Qualitative methods were used at 87 survey stations to estimate abundance for lower density populations, observe presence/absence in at-risk populations, and determine coldwater taxa occupancy in streams that have not been previously surveyed. In addition to population estimates, the results of these surveys documented five previously unknown brook trout populations and identified eight streams as potential candidates for brook trout reintroduction.

Water Quality Protection

Historic data in the Maryland coldwater fisheries database was searched to identify streams with the temperature and biological data required to receive additional water quality protection under Maryland Department of the Environment (MDE) regulations. These streams could potentially be redesignated from a less protective classification to Use Class III, coldwater or Use Class IV, recreational trout water. The Class III and Class IV designations provide additional temperature protection for surface waters. The search returned 15 streams with historic data that met the requirements for reclassification. Data collection in 2024 found seven additional streams that also met the requirements. In total, data for 22 streams were compiled and submitted to MDE for additional regulatory protection. MDE will review the data and determine how to proceed.

Brook Trout Genetics

Brook trout tissue samples continue to be collected for genetic analysis. The results are used to determine brook trout patch genetic diversity and to address data gaps in the statewide genetics assessment. In 2024, tissue samples were collected for ten patches and submitted to U.S. Fish and Wildlife Service Northeast Fishery Center Complex in Lamar, PA. Maryland currently has genetics data for 39 of 127 brook trout patches, with an additional 20 patches submitted for analysis.

Brook Trout Translocations

Maryland pursued three brook trout translocation projects in 2024. Temperature and habitat data in the three receiving streams have been collected over the past two to three years to confirm suitable habitat conditions for brook trout. Two source populations that were selected based sufficient population abundance to support the project and similarity of habitat between the

source streams and the receiving streams. Each receiving stream received 100 individuals, 200 of which were moved from one source stream and 100 were moved from the second source stream. Electrofishing surveys will be conducted in 2025 to determine successful population establishment in the receiving streams and to monitor population abundance in the source streams.

Chesapeake WILD Grant

Maryland received a $238,900 grant award in 2024 through the National Fish and Wildlife Foundation Chesapeake WILD Grants Program to support brook trout conservation projects. These projects will include forest and agricultural land protection, riparian buffer restoration, aquatic organism passage, environmental education events for underserved youth, and a brook trout propagation program.

Brook Trout Propagation

A brook trout propagation project was initiated in 2024 at an older hatchery facility near Thurmont, MD. While testing the infrastructure, it was determined that the facility needed more repairs than initially anticipated. The project was postponed to 2025 and the plans were expanded to include an isolated recirculating culturing tank that would be maintained by coldwater hatcheries staff. Several planning details need to be resolved with regards to biosecurity, but the project is on track to begin propagating brook trout in the fall of 2025.

Nontidal License Fee Changes

Maryland's Freshwater Fisheries and Hatcheries Division is currently outspending annual revenue and is projected to be in a budget deficit by FY2027. Nontidal license fees have not been increased in 17 years and the trout stamp and senior consolidated license fees have not been increased in 32 years. To address the revenue deficits, Freshwater Fisheries and Hatcheries Division worked with members of Maryland's fisheries advisory committees, the Sport Fish Advisory Commission, and the constituents that these groups represent to develop a plan for license fee increases. The plan was written into a bill that was filed in the 2025 session of the Maryland General Assembly. If the bill is passed, the new fees will be in effect on July 1, 2025. The new revenue generation should keep Freshwater Fisheries and Hatcheries Division funded at existing levels for the next 14 years.

Coldwater Management Plan

Efforts to develop a Coldwater Fisheries Management Plan continue, with a completed document anticipated in 2025. There has been considerable discussion about the proposed objectives and management strategies, particularly between Freshwater Fisheries and Hatcheries Division staff. The Coldwater Fisheries Program has made progress finding compromises that address the diverse challenges of coldwater fisheries management throughout the state. A plan has been drafted with four management objectives, 10 sub-objectives, 27 strategies and 78 actions. The draft is currently in internal review and some modifications will likely be made. After this process is complete, the document will be presented to the Coldwater Fisheries Advisory Committee for review.

Coldwater Habitat Projects

The Wolfden Run Culvert removal project was completed in 2024. Wolfden Run is a tributary of North Branch Potomac River upstream of Jennings Randolph Reservoir. The stream supports a brook trout population that was isolated by a perched culvert. The culvert was located at an important road crossing for local traffic, but was deteriorating and creating a potential public hazard. Maryland Department of Natural Resources partnered with Garrett County Government, U.S. Fish and Wildlife Service, and Trout Unlimited to the remove the culvert and replace it with a bridge that allows fish passage. The outcome of this project achieved goals to improve connectivity in the stream while maintaining an important roadway for the local community.

Pond Discharge Modifications

Maryland has been investigating the impacts of small pond discharges to coldwater streams for several years. In 2023 and 2024, Freshwater Fisheries and Hatcheries Division pursued a project that attempted to reduce pond discharge temperatures by modifying riser structures to release cooler, deeper water rather than surface water. The modification design includes a sleeve that is placed over the riser to slightly elevate the pond depth. A pipe that is positioned towards the bottom of the sleeve draws deeper water, which fills the sleeve and discharges through the riser. The modifications were tested on two ponds in 2023 and three ponds in 2024 using continuous temperature loggers. The temperature data suggested that discharges from the modified risers were cooler than the surface water temperatures of the ponds. It is hypothesized that broad usage of the modifications may mitigate the cumulative effect of multiple ponds in a watersheds that supports coldwater fisheries. The next steps are to discuss the modifications with Maryland's Dam Safety Division to determine if they are permittable and to expand the application of the modifications for additional data collection.

Coldwater Hatchery Renovations

As discussed at the 2024 roundtable, Maryland's Albert Powell Trout Hatchery in Hagerstown is expected to undergo major renovations and upgrades in a two-phase process. The first phase of

this project upgraded wastewater treatment to more effectively meet the state's water quality criteria. This was completed in 2024. The second phase will build new culture facilities, cover the existing raceways, and renovate aging infrastructure. This work is projected to begin in 2025 and is currently on schedule.

NORTH CAROLINA

Submitted by Jake Rash – North Carolina Wildlife Resource Commission

Armstrong State Fish Hatchery

The NCWRC's Armstrong State Fish Hatchery sustained significant damage as a result of flooding and landslides during Hurricane Helene. Some of the hatchery's trout escaped during the flooding; however, most of the 600,000 fish of various sizes died when the storm compromised the water supply to the raceways and hatchery building. Repairs to the facility will occur during 2025.

Post-Hurricane Helene: Stocked Trout Resources

Due to damage associated with Hurricane Helene, stockings of Delayed Harvest Trout Waters were postponed until November (typically, stockings occur in October and November), with additional stockings in December 2024. NCWRC staff evaluated all Delayed Harvest Trout Waters and Hatchery Supported Trout Waters in preparation for the 2025 stocking season. Assessments considered whether each location was in an active disaster recovery area, had major stream damage impacts, had parking and access infrastructure damage, and whether the location could safely be accessed by stocking trucks and anglers. We will continue to evaluate locations to ensure that they are included in future stockings as they become open throughout the year.

Post-Hurricane Helene: Self-Sustaining Trout Samples

Numerous self-sustaining trout populations in North Carolina were within Hurricane Helene's path. Selected populations were evaluated in 2024 to determine potential impact, but significant effort will be placed into assessing trout populations in 2025. Over 1,000 sample locations have been identified across 21 counties, and efforts will be prioritized by Helene rainfall amounts, trout species, historical population data, native Brook Trout restoration projects, and partner and NCWRC interests.

Bobby N. Setzer State Fish Hatchery Renovation

Bobby N. Setzer State Fish Hatchery is the NCWRC's largest trout hatchery. Built in the late 1950s, the facility's aging infrastructure requires replacement before a potentially major failure. Originally, the facility was slated for renovation in 2025, but damage to Armstrong State Fish Hatchery required the NCWRC to pause the renovation of Bobby N. Setzer State Fish Hatchery. Beginning in 2026 (after Armstrong State Fish Hatchery is repaired), the hatchery will undergo a major renovation that will result in a reduction in trout stockings during the 2026, 2027 and potentially 2028 trout stocking seasons. During the renovation, our goal is to provide trout angling opportunities at all Public Mountain Trout Waters locations via a reduced schedule.

Bobby N. Setzer State Fish Hatchery Renovation: Social Science Evaluation

This renovation project has the potential to significantly impact trout fishing and its associated activities throughout the state. The renovation from start to finish is expected to take approximately 2 years, but the cumulative effects (e.g., lag time in post-renovation production) could last into 2028. As such, there is the unique opportunity to assess trends in participation, angler preferences, number of anglers that temporarily "lapse" or permanently drop out, and satisfaction before (2024), during and after the renovation project. It is important to gauge opinions at all three times related to the disruption to be able to compare opinions across all timelines. These updated data will provide insight into potential angler impacts (and associated, timely remediations), develop a case study to inform the NCWRC and other agencies facing similar challenges, and will guide future management decisions. Literature on angler adaptation to fishing quality changes is minimal and thus, this proposed project would fill a significant knowledge gap. Additionally, this project will provide a continued line of communication with anglers throughout the disruption, allowing for increased trust and engagement with the public.

Brook Trout Genetics

The NCWRC has been collecting genetic information for the State's Brook Trout in conjunction with trout distribution efforts. In 2016, the U.S. Geological Survey genotyped 7,588 Brook Trout representing 406 collections from across North Carolina at 12 microsatellite loci. Results of this effort found genetic diversity within populations to be low and that little, if any, gene flow occurs among populations. In addition, most populations show limited evidence of introgression by northern origin hatchery strains. Since 2016, additional Brook Trout have been examined, and approximately 500 additional individuals have been processed annually. These results represent valuable information for management and restoration efforts of Brook Trout in North Carolina. In 2023, a phylogenomic study was initiated to further understand adaptive potential and deep evolutionary lineages among populations, refine estimates of genetic relatedness and diversity, improve understanding of the distribution of adaptive traits across the landscape, and provide unprecedented insight into patterns of local adaption and past connectivity, which will increase the efficacy of brook trout reintroduction and restoration activities in North Carolina.

Brook Trout Restoration

The NCWRC has used recent genetic data to plan Brook Trout restoration activities. Since 2007, we have worked with partners to conduct 24 projects via the translocation of fish from selected source populations. Additional restorations are planned for 2025.

Citizen Science Temperature Monitoring

In 2023, a volunteer effort began to establish a long-term temperature monitoring network in North Carolina's coldwater streams. Led by Trout Unlimited members, this project utilizes temperature loggers equipped with Bluetooth technology that allows data uploads via mobile devices. These

data are then transferred to NCWRC staff and incorporated into local and regional databases. In addition, volunteers will help capture streamflow estimates via participation in the USGS Flow Photo Explorer project (link), which utilizes timelapse photos from game cameras. Additional monitoring sites will be established in 2025.

Trout Management Plan Revision

The NCWRC's original Trout Management Plan was adopted in 1989 and revised in 2013. In 2024, the NCWRC initiated a process to revise the current Trout Management Plan. Further information will be provided to the Trout Committee throughout the revision process.

Winter Stockings of Trout in Selected Small Impoundments

In November 2016, the NCWRC stocked selected small impoundments in the mountain region with trout. Community collaborators and the NCWRC have had long-standing partnerships to provide angling opportunities in these waters, which have focused primarily on channel catfish stockings in warmer months. Such stockings have been (and remain) dependent upon the availability of trout beyond the numbers needed to stock traditional stocked-trout resources (e.g., Delayed Harvest Trout Waters and Hatchery Supported Trout Waters). These stockings have been incredibly popular with anglers, and in 2019, they were expanded into the piedmont region of North Carolina.

Trout Distribution

The NCWRC continues its efforts to document the distribution of North Carolina's self-sustaining Brook Trout, Brown Trout, and Rainbow Trout populations. To date, over 700 Brook Trout populations have been identified. The NCWRC continues sampling efforts to identify new populations and evaluate assemblages associated with legacy data. These occupancy data help support numerous conservation efforts (e.g., Eastern Brook Trout Joint Venture range-wide assessment, research [NCWRC, partner, and university], land acquisition, conservation planning, etc.). In addition, ancillary data collected via these samples populates critical, regional databases (e.g., Brook Trout restoration sites, habitat restoration opportunities, barrier inventory, etc.). Last year, the NCWRC conducted 264 surveys on 136 streams across 19 counties and seven major river basins and collected genetic tissue from 22 Brook Trout populations.

Long-term Trout Monitoring

In 2012, the NCWRC initiated efforts to obtain routine data on wild trout populations. Initial long-term monitoring efforts were completed in 1996; however, recent data are desired to gain a greater understanding of wild trout population dynamics in waters managed by the NCWRC. Colorado State University researchers are working with the NCWRC to evaluate population dynamics and future monitoring strategies. As appropriate, the NCWRC will continue to seek to partner with fellow resource agencies to develop more robust data sets.

Brook Trout Population Responses to Climate Variation Across the Southeast USA

Led by researchers at Colorado State University, and in conjunction with researchers at the NCWRC, U.S. Geological Survey Leetown Science Center, Great Smoky Mountains National Park, and U.S. Forest Service Southern Research Station, this project seeks to take a manager-centric, co-production approach to characterize how and why climate change impacts on Brook Trout populations differ over space in the Southeast USA. This project is composed of three phases: (1) Evaluate the robustness of GIS-derived landscape data to predict spatial variation in measured stream temperature and link thermal regimes to trout population stability over time, (2) Predict spatiotemporal variation in trout abundance and project population responses to future climate patterns for all stream segments, and (3) Develop a web-based decision support tool to inform and engage federal, state, and local partners managing coldwater resources. Each phase will inform the next, and upon completion, this project will have three primary outcomes: (1) allow trout managers to update their sampling protocols by identifying how often and where to sample given limited time and resources, (2) inform prioritization efforts at regional scales (e.g., Southeast Conservation Adaptation Strategy [SECAS], Southeast Aquatic Resources Partnership [SARP], and Eastern Brook Trout Joint Venture [EBTJV]) by identifying climate refugia and populations at greater risk, and (3) function as a planning tool to assist managers with spatial prioritization of management actions by ranking streams based on their population vulnerability to climate variation. Relevant publications since previous Trout Committee update:

Lu, X., A. Kaplan, Y. Kanno, G. Valentine, J. M. Rash, and M. Hooten. *In Press*. Stochastic spatial stream networks for scalable inferences of riverscape processes. Spatial Statistics.

Valentine, G. P., X. Lu, C. A. Dolloff, C. N. Roghair, J. M. Rash, M. B. Hooten, and Y. Kanno. 2024. Landscape influences on thermal sensitivity and predicted spatial variability among brook trout streams in the Southeastern USA. River Research and Applications 40:1242–1255.

Lu, X., Y. Kanno, G. P. Valentine, J. M. Rash, and M. B. Hooten. 2024. Using multi-scale spatial models of dendritic ecosystems to infer abundance of a stream salmonid. Journal of Applied Ecology 64:1703–1715.

NCWRC Trout Page

The NCWRC continues to update its trout webpage to provide pertinent information concerning its trout management program in one place to help facilitate information exchange. The page can be found at www.ncwildlife.org/trout. Recently, a sticker was developed to promote the trout page via a QR code. Although distribution has focused on outfitters, the sticker has been extremely popular with anglers and non-anglers.

Habitat Enhancement

The NCWRC is actively engaged with partners to identify and initiate coldwater habitat enhancement projects. Efforts span the range of trout distribution in North Carolina, which includes waters on public and private lands. Additionally, staff have initiated projects to evaluate the efficacy of a rubberized fish ladder (Flexi-Baffles) to improve passage within native Brook Trout populations. Habitat enhancement activities remain a key aspect of trout management in the state.

Eastern Brook Trout Joint Venture

NCWRC has continued to be actively involved with the Eastern Brook Trout Joint Venture (EBTJV). Jake Rash serves as North Carolina's State Representative on the Steering Committee and Chair of the Steering Committee.

SOUTH CAROLINA

Submitted by

TENNESSEE

Submitted by Jim Habera – Tennessee Wildlife Resource Agency

- The primary focus in Region 4 (east Tennessee) in 2025 will be evaluation of effects from the flooding and aftermath of Hurricane Helene in September 2024. Additional monitoring sites on wild trout streams in the French Broad, Pigeon, Nolichucky, and Doe River watershed will be added to the sampling schedule during summer and fall of 2025.

- Infrastructure damage (boat ramps and angler access areas) occurred at several locations on the Watauga River (Wilbur tailwater) downstream of the confluence with the Doe River as a result of Helene-related flooding. Most of this damage has now been repaired. The fish barrier (constructed in 2007) on Left Prong Hampton Creek (Doe River tributary) was also damaged by this flooding, including substantial erosion of one bank immediately below the structure. The barrier is still functional but reconstruction/ repair work will be needed to prevent it being further compromised. TWRA is working with partners including NRCS to develop plans for repairing the barrier, with work to occur during late spring of 2025. Left Prong Hampton Creek supports one of Tennessee's best native Brook Trout populations and is the result of a multi-partner restoration project during 1998-2000.

- Native Brook Trout fingerlings (82) produced by the Tennessee Aquarium Conservation Institute were released in Right Prong Rock Creek (Cherokee National Forest, Unicoi Co.) in May 2024. This stream represents the second native Brook Trout restoration project in the Nolichucky River watershed and the fingerlings were progeny from adults previously collected in Phillips Hollow (CNF, Greene Co.). The Phillips Hollow population was established with translocated fish from two streams in North Carolina in 2019. Both populations will be surveyed in 2025 to determine their status following the Helene-related flooding. No other native Brook Trout restoration work will be initiated in 2025 to accommodate the additional monitoring being conducted to assess Helene-related impacts.

- Fingerling Rainbow Trout stocking (100k/year) was suspended in the Norris tailwater (Clinch River) in 2024 given the well-established natural reproduction (and recruitment) by Rainbow Trout that is occurring there now. The Rainbow Trout fishery will be managed through these wild fish and spring/summer stocking of 41k hatchery-produced adult Rainbows. A local Trout Unlimited chapter will assist with annual shoreline electrofishing surveys to assess wild Rainbow Trout year-class strength. TWRA is no longer stocking fingerling Rainbow Trout in any of its cold tailwaters.

- Updates to the Norris, Boone/Ft. Patrick Henry, Tims Ford, and Hiwassee tailwater management plans will be in progress during 2025.

- A portion of the angler survey (creel) effort in Region 4 is being redirected to smaller stocked streams and delayed harvest streams to evaluate angler use and harvest and determine if any adjustments (e.g., stocking rate or frequency) are appropriate.

- TWRA's hunting and fishing license fees will increase on July 1, 2025. The average increase for most licenses will be 28% and the last increase was in 2015. One notable change to the license structure is that there will no longer be a "Trout Stamp". A resident hunting/fishing license will now cover trout fishing, as will non-resident fishing licenses (1-day, 7-day, and annual).

- Tennessee has a new state record Cutthroat Trout (6 lbs., 9 oz.). This fish was caught in June 2024 at the Boone tailwater by a non-resident angler and was one of the Snake River Finespot fish stocked in December 2021 (at 9 in.). None of the 2,500 Yellowstone Cutthroats stocked in October 2023 were recaptured during the 2024 monitoring samples in the Boone tailwater and survival of the 600 Bear Lake Cutthroats stocked in August 2024 is yet to be determined. Cutthroat Trout have been problematic to raise at Dale Hollow NFH and TWRA's Springfield Hatchery (as elsewhere in the region). However, anglers like these fish and TWRA is considering other options for continuing to produce limited numbers for use in its stocking program.

TEXAS

Submitted by Patrick Ireland

Neighborhood Fishing Program (NFP) Evaluation
We're assessing Rainbow Trout stocking at 18 NFP ponds to evaluate participation, catch rates, and harvest data. The study also examines angler expectations and motivations, aiming to refine stocking schedules and improve engagement. Additionally, we're monitoring cormorant activity to understand its impact on trout populations.

Community Fishing Lakes (CFLs) Evaluation
A similar evaluation is underway for approximately 140 CFLs, focusing on angler satisfaction and the effectiveness of trout stocking.

Guadalupe River Angler Evaluation

From November 2025 to March 2026, we'll reassess the utility of the three regulation zones on the Guadalupe River's Canyon Tailrace.

VIRGINIA

Submitted by Brad Fink – Virginia Department of Wildlife Resources

Stocked Trout

Stocked Trout Angler Creel Survey

VDWR is going to conduct an electronic (due to funding) angler creel survey on stocked trout waters start May of 2025 to gather information and update Virginia's Stocked Trout Management Plan. VDWR continues to implement the strategies in the current management plan to reach the objectives and goals presented in the plan. https://dwr.virginia.gov/fishing/trout/stocked-trout-management-plan/

Tiger Trout

Virginia began raising Tiger Trout in Coursey Springs Hatchery in spring of 2021 to determine their growth and survival in the hatchery compared to other species. Tiger Trout survived and grew better than Rainbow Trout and will most likely become a constant product of the hatchery. The initial goal was hatchery oriented, but it created a large buzz among anglers as well. Anglers seems to be pleased with the Tiger Trout that have been stocked since 2021. There is currently no state record category for Tiger Trout, nor are there plans to create one at the time

Wild Trout

Reintroductions

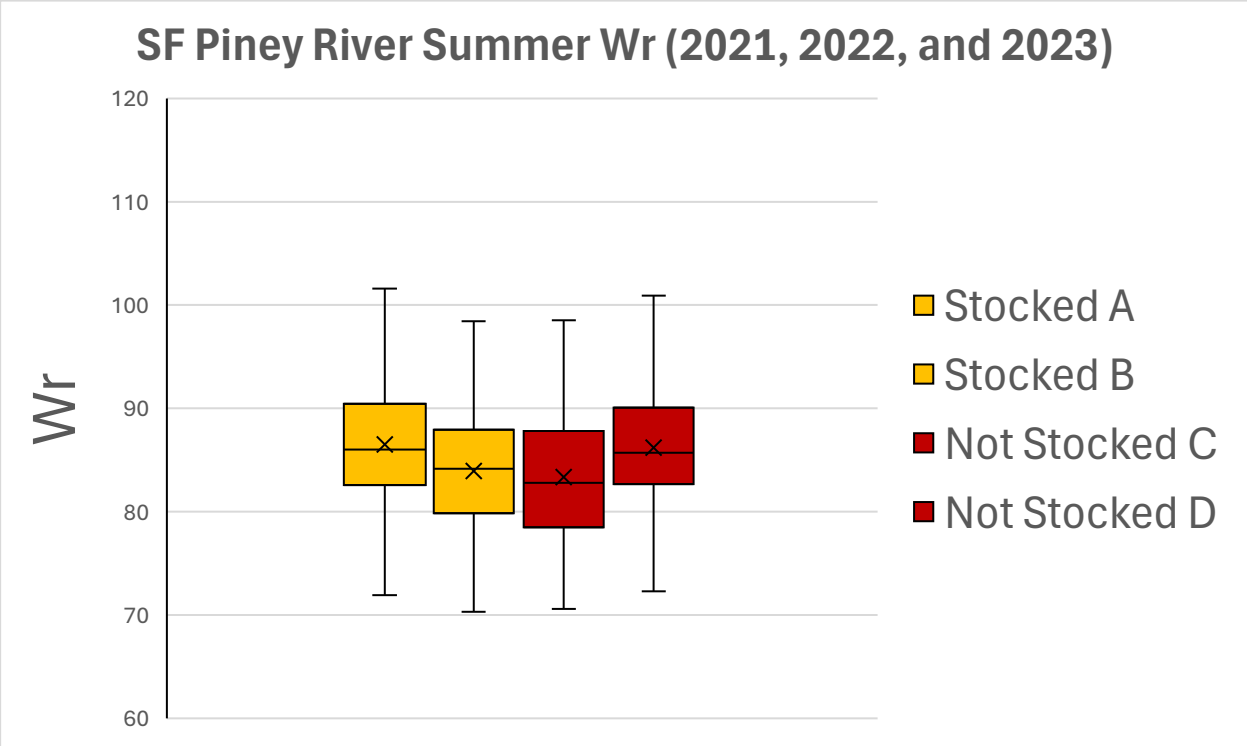
DWR is looking into reintroducing trout into five streams over the next two years thought to be extirpated of Brook Trout. These streams originally had Brook Trout prior to 1990 but have not had a positive eDNA or electrofishing sample results since. Limiting factors including temperature, pH, etc. will be examined prior to transporting fish from a nearby source. Reintroduction will include three source population within the same watershed. Most recent reintroduction in Passage Creek: https://www.youtube.com/watch?v=qrKnzZ2UI1M

Impact of Stocking Hatchery Trout over Wild Brook Trout

In 2021, 2022 and 2023 we sampled multiple locations on five streams to determine the possible impacts to wild trout populations. Dry River, North River (Shenandoah Valley),

Helton Creek, Fox Creek (Southwest VA) and South Fork Piney River (East Blue Ridge) were sampled. Three of the streams had four sites sampled and two had six sites. On streams with four sites, two were within the stocked section and two were not. A similar approach was taken on the streams with six sites. These samples were collected in late July and early August in 2021, 2022 and 2023. We also sampled in May of 2022 and 2023 in stocked and unstocked sections of the five streams. Otoliths were collected near each sample site in August of 2022. Results of catch rate and relative weights indicate no impacts to the wild populations.

Figure below indicates general results on all five streams (Spring and Summer)



Wild Fish Health Sampling

We are continuing our fish health sampling efforts in wild Brook Trout streams. VDWR Regions II, III and IV have been choosing two wild trout streams each year and sending samples to the Lamar Fish Health Center in Lamar, PA for analysis. Streams were initially chosen based on fishing pressure and popularity, since these streams are visited more often. Recently we have sampled less popular streams to continue collecting baseline health data statewide. This coming season we plan to resample the high fishing pressure streams and start them on a 5-to-6-year rotation.

Wild Trout Sampling – Monitoring

VDWR strives to determine the spatial distribution of all wild trout populations in Virginia to the catchment level every 7 years. We conduct fish surveys on each wild trout stream in the VDWR Coldwater Stream Database every 5 to 7 years by backpack electrofishing or eDNA analysis.

VDWR conducts standardized population assessments on 32 selected streams annually. This effort began in 2014 and continues to collect long-term dataset on these streams. A subcommittee of VDWR's Coldwater Science Team is tasked with monitoring, analyzing and reporting the results of this effort.

Brown Trout Introduction Impacts on Wild Brook Trout

"Trends in Biomass and Relative Weight of Brook Trout in Response to Introduction of Non-native Brown Trout in an Appalachian Mountain Stream" ..... Publication in the 2021 Journal of SEAFWA. Virginia is monitoring streams with wild Brook Trout and Brown Trout coexisting and have not seen Brown Trout overtake Brook Trout. Other streams will be added for analysis as long-term datasets become available.

AOP Training and Assessments

In June of 2021 multiple DWR biologists and staff received AOP assessment training for North Atlantic Aquatic Connectivity Collaboration (NAACC). Recently there has been an effort to complete the Southeast Aquatic Resource Partnership (SARP) training. Trout Unlimited in Virginia has taken the initiative to assess crossings on wild trout streams with the VDWR Complementary Work Force program (volunteer program) with the SARP protocol. In 2024 the Trout Unlimited AOP team assessed approximately 50 crossing on wild Brook Trout streams.

Dry Run Restoration

Dry Run is a stocked trout stream in Southwest Virginia. This restoration project was completed in 2024. It has been a project spanning over multiple years given the funding source. The stream has been stocked for multiple years with Rainbow Trout. Recently, following restoration from agricultural land use Biologists found signs of reproducing Rainbow Trout. Currently discussions are underway to possibly establish Brook Trout and

try to eradicate Rainbow Trout using YY male stocking. Currently means just before writing this.

Outreach

Facebook / Youtube

VDWR has been putting videos, posts, etc., on social media about stocked and wild trout management and fishing to engage with the public and promote recreation and conservation of these resources.

Trout Slam

VDWR launched a marketing campaign called the Virginia Trout Slam. Anglers can catch all 3 species in one day, take pictures and send it in, the angler will get a bumper sticker. Over 100 people did it the first year. This program was supported by publicizing the stocking of all three species in waterbodies and it was successful. More information here https://dwr.virginia.gov/fishing/virginia-trout-slam-challenge/

Saving Private Stocked Trout Waters

Bringing community members together to clean private waters has retained fishing access on stocked trout waters in Shenandoah County. This effort continues annually the third Saturday of every March. See 2023 video on Youtube here: https://www.youtube.com/watch?v=McnEppTzw5c

WEST VIRGINIA

Submitted by David Thorne – West Virginia Department of Natural Resources

- 2024 Trout stream surveys – approximately half of typical, managed 36 surveys. Long-lasting drought conditions hampered normal survey activities. Extreme fish stress, warm temperatures, low and completely dry streams made sampling harmful to fish populations.
- Initiated plans for DNR long-term monitoring scheme. WVU, Monongahela National Forest, and Trout Unlimited have excellent monitoring strategies, but analysis of range coverage identified obvious spatial gaps. In 2025, a plan will be implemented to begin filling some of those data gaps with 120 sites on a 3 or 4 year rotation (30 – 40 sites annually). Population, genetics, habitat, stream flow, stream temperatures will be assessed for each site.
- The extended drought in the summer of 2024 was followed by a very cold and snowy January 2025. In late January and early February, as much as 8 feet of snow had accumulated across much of the highest terrain of the Brook Trout range. Over the course of a week to 10 days, most of this snow melted off with a warm-up and rainy period. The effects of this drought and flooding cycle on Brook Trout survival and recruitment will be evaluated in the coming years.
- Habitat work partnership continues with West Virginia University's Natural Resources Analysis Center and the Monongahela National Forest. Two miles of habitat work was completed on Shavers Run on National Forest lands improving sustainability for native Brook Trout
- Continuing to work with Army Corps of Engineers out of Pittsburgh on a AOP project in Kumbrabow State Forest for the replacement of a concrete low-water bridge to a campground. The existing structure impairs habitat, hinders access to the campground at elevated flows, and is a recognized barrier to Brook Trout movement. Feasibility study is nearing completion with proposed alternatives for improving all conditions at the structure.
- The Acid Waters program continues status-quo for now. Inflation, primarily of trucking costs, has increased total costs by three-fold in the last ten years. Funding remains adequate for maintaining current levels, but limits expanding the program into recognized impaired watersheds. All of the easy targets are being treated and fisheries have shown great improvements across those environments impaired by acidic atmospheric deposition. Remaining opportunities identified for addition to the program are more difficult to access, greatly increasing startup and maintenance costs. Best recent success was the addition of Red Creek headwaters, which has now been acquired by The Nature Conservancy as their Dobbins Slashing Area. Access remains difficult and only by tracked crawler truck, delivering approximately 90 tons of high-quality limestone sand annually. This improves the water quality in a historically great Brook Trout fishery along 9 miles of Red Creek within the Dolly Sods Wilderness Area. A long-term access agreement and management plan is in the works with TNC to ensure this resource can continue to be improved.
    - We currently treat 62 waters (and cooperatively work with WVDEP on additional waters impaired with Acid Mine Drainage)

    - DNR's efforts on Acid Precipitation-impaired waters directly improves fishery condition on over 350 miles
    - Staff is currently working on a plan to improve the sustainability of the program with access to increased funding, better supply-chain conditions, and improved delivery of limestone sand material to necessary locations.
- We are currently engaged with WVU to do trout research – working with two PhDs candidates and two MS students exclusively on native Brook Trout research. Another project using Kyle Hartman's lab is studying the impacts of stocked trout on the Endangered Candy Darter and whether our stocking program needs adjusted to account for take, be it through direct predation, displacement, or effects of increased angler presence.
- Working with Canaan Valley Resort State Park to host the East Coast Trout Management and Culture Workshop on June 7 – 10, 2027.