BUREAU OF FRESHWATER FISHERIES
MONTHLY REPORT

December 14, 2021 – January 13, 2022

Shawn Crouse, Chief
Craig Lemon, Superintendent
Edward Conley, Superintendent

Christopher Smith, Principal Fisheries Biologist
Ross Shramko, Principal Fisheries Biologist

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Tyler Tresslar, Crew Supervisor, WW
Nicholas Healy, Crew Supervisor, WMA

Scott Collenburg, Sr. Fisheries Biologist
Eric Boehm, Sr. Fisheries Biologist

Maria Berezin Dowling, Biologist Trainee
Justin Rozema, Biologist Trainee

Thomas Bissonnette, Technician II
Ron Jacobsen, Technician II
Charles Sedor, Technician II

Matthew Gadek, Sr. Wildlife Worker
Jonathan Kline, Sr. Wildlife Worker
Shaun Young, Sr. Wildlife Worker
Doug Cutler, Sr. Wildlife Worker
Kyle Civalier, Sr. Wildlife Worker
Nick Ruberto, Sr. Wildlife Worker
Brad Duckworth, Sr. Wildlife Worker

Andrew Hutnik, Wildlife Worker
Grace Johnson, Wildlife Worker
Travis Nitko, Wildlife Worker

Steve Jeffries, Repairer

Nancy Geiger, Agency Services Rep 3

Seasonals: Scott Bently, Christian Nitko, and Cheryl Weeks

FISHERIES MANAGEMENT

COVID-19 Impacts - This month many staff from across all facets of the Bureau of Freshwater Fisheries were in unable to work and/or were in quarantine either due to testing positive for COVID-19 or due to having close contact with an infected person. As a result, a significant amount of time was spent dealing with the impacts and in some cases productivity was diminished. (staff)

2022 Spring Trout Stocking - Continued making database changes for the 2021 Spring Trout Stocking Season. Each year, the regional biologists may have changes to the trout stocking program that will have an effect on stocking allocations or stocking locations for the following season. These changes are then updated in the trout stocking database and the program is run with these updates and a new allocation is created. (Shramko)

2022 Spring Trout Stocking – Began conversations about the 2022 trout stocking season in light of the COVID-19 pandemic. Biologists and staff are in discussions about how to safely run the 2022 trout stocking season to minimize the risk of staff and angler exposure to COVID-19. The intention going into 2022 is to return to a normal stocking schedule, rather than utilizing the accelerated schedule created earlier in the COVID-19 pandemic. More information is still needed to determine which stocking schedule will be best for health and safety of staff and anglers as well as successful hatchery operations. (Berezin-Dowling)

New Trout Stocking Points Assessment - Site visits were conducted by the regional biologist on December 28 at Hohokus Brook (Bergen), Pascack Brook (Bergen), Tenakill Creek (Bergen), and Saddle River (Bergen) to assess the possibility of adding new trout stocking locations along each waterbody. Most locations visited were determined to be infeasible stocking locations due to a combination of poor stream habitat for holding fish (shallow, wide, and lacking structure) and poor access to the waterbody for anglers (lack of access trails, dense vegetation, and steep banks). However, Spring Avenue and Grove Street bridges on Hohokus Brook as well as Red Mill Road and Otto C. Pehle Park on the Saddle River had suitable combinations of fish habitat and public access to warrant further consideration. Spring Ave. and Grove Street are upstream and downstream (respectively) of Dunham Trail Woods, a wooded trail that could provide additional angler access to approximately 0.5 miles of Hohokus Brook within the currently established trout stocking boundaries. The stretch of the Saddle River from Red Mill Road to Otto C. Pehle Park is downstream of the current trout stocking boundary at West Century Road. The Saddle River County Park system, which provides access to the Saddle River upstream of this area, continues to provide great access in the form of a paved walking path adjacent to the river. Fish habitat in this area consists of multiple riffle-run-pools with woody and rocky structure, which contrasts with other downstream areas visited that consisted mostly of shallow, sandy runs. This area would provide approximately 1 mile of additional trout stocked water on the Saddle River. Additional steps should be taken to continue assessing the feasibility of stocking trout at these locations. (Rozema)

Columbia WMA Transects (Warren) – Last cycle, staff performed the 10 transects on the Paulins Kill within the Columbia WMA. The data collected from those surveys was compiled and submitted to the Fisheries Chief and Assistant Director for comment and next steps. The

data collected showed several locations have suffered from severe erosion at several due to the high water levels the Paulins Kill experienced the past Fall. (Shramko)

Spring Lake (Country Lakes, Burlington) – Responded to a complaint regarding the water level at Spring Lake, the largest lake within the County Lakes community on December 21. The complainant called the Lebanon office on December 16 and was directed to the Central Region Office. The individual was concerned with the overall condition of the pond and aquatic life and believed the lake had been lowered too far. Upon inspection on December 21, the Township was found in compliance with the issued water lowering permit, Spring Lake (permit # 21-149). The lake(s) are surrounded by a housing community however, Pemberton Township owns/maintains the lakes and dams. A permit has been issued each of the last four years (2018 – 2021) with no additional complaints received. The permit expired on 12/31/21, so a follow-up inspection is planned in mid-January to see if the water level started coming back up. Recent dry conditions and limited rainfall may delay the refilling of the lake. Pemberton Township regularly lowers their waterbodies in the fall through early winter for weed control and general maintenance. The Township strategically lowers the ponds in the fall and begins to raise the water level at the end of December attempting to physically pull nuisance vegetation from the bottom. A practice that was rather common in the past, but not utilized as much in recent years. A seining survey was completed a few years ago and the pond supports a native Pinelands fish community with very few Largemouth Bass present. (Smith)

Stream Temperature Monitoring – This program was initiated in 2012 to monitor stream temperature in our major rivers that are currently regulated as Trout Maintenance. The continuous temperature monitoring program is designed to closely monitor stream temperature in areas that have marginal thermal habitat for the purpose of trout stocking, understanding thermal regimes in our major river systems, and expand the program to Trout Production streams to gain a deeper understanding of stream temperature's role on the entire life cycle of wild trout in New Jersey and assist in guiding management of these streams. This reporting period effort focused on compiling data from stream temperature loggers that were placed as part of the Brook Trout Strongholds Project in 2021 and analyzing impacts from stormwater surge events on streams that documented wild trout now or historically. (Collenburg)

> **Stormwater Impacts** - Between 2018 and 2020 NJDFW's continuous stream temperature monitoring network that was used to identify Brook Trout habitat resilient to climate change in NJ found that 28 individual sites had at least one water temperature (T_w) surge on 24 streams and a total of 134 events defined as a 2°C increase of water temperature, or greater, in a 30-minute period. Met with the Division of Science and Research to review results on December 22. (Collenburg)
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> **Ecosheds –** Received access to Ecosheds database for access to continuous stream temperature records. This database is not only useful in storing continuous data but is used to help inform projects related to Brook Trout conservation. Data from 2021 will be uploaded to help inform future modeling. (Collenburg)

TECHNICAL ASSISTANCE

DEP Invasive Species Workgroup – Reviewed a draft document that was prepared by Joe Bilinski, NJDEP with input from the Invasive Species Workgroup. The document is intended to provide guidance on prioritizing the Department's roll in invasive species management, by identify goals, strategies, and actions. A statewide invasive species management plan was finalized in 2008 but was never implemented. (Smith)

Eastern Brook Trout Joint Venture – Attended virtual steering committee meeting for the Eastern Brook Trout Joint Venture. The meeting updated everyone with each state's updates, and work performed and planned for Brook Trout. It also gave information about possible future funding opportunities mostly from the infrastructure bill. (Shramko)

Delaware River Watershed AOP (Aquatic Organism Passage) – Attended grant proposal meeting via Teams on 1/4/22. This was an introductory meeting for state leads (NJ, NY, PA, and DE). Currently, collecting potential project ideas that will improve AOP within the watershed. These will then be discussed to determine priority and feasibility amongst state leads later this month. (Boehm)

National Climate Assessment 5 – Attended a workshop on January 11 to provide input to the US Global Change Research Program on formation of the National Climate Assessment (NCA) 5 chapter that encompasses Ecosystems, Ecosystem Services, and Biodiversity. The NCA provides technical analyses of the current and future trends in global climate change, and discusses the effects of these changes in natural, built, and social systems. (Collenburg)

Masons Run – Fisheries Biologists, Chris Smith and Scott Collenburg, coordinated with Wildlife Control's Peter Stark to assign a trapper to a section of Masons Run that has been dammed by beaver activity. Masons Run is unique in that it holds a wild population of Brook Trout and is located in Camden County, NJ's southernmost population of native Brook Trout. A temperature study in the summer of 2021 documented elevated stream temperatures due to the large, dammed areas. It's likely that the beavers and Brook Trout will not co-exist because of Brook Trout's requirement for cold water. Active management of the beavers and a combination of other management actions may be necessary to improve water quality conditions for Brook Trout. (Collenburg/Smith)

Freshwater Permits - Reviewed Land Management Reviews (LMR's) from a freshwater fisheries perspective to address any foreseeable negative impacts to local fisheries. Reviewed water lowering permits and fish stocking applications and contacted applicants as necessary to obtain required information. Responded to requests from the public for information on general fisheries questions, fish stocking and water lowering permit programs. (Staff)

WMA Fishing Tournament Permits – The Division started to receiving applications for the 2022 WMA Fishing Tournament season. The applications will be reviewed in January to alleviate any conflicts and begin to issue permits. The 2021 report forms will be analyzed over the next couple months with a summary report available by early spring. (Smith)

INFORMATION AND EDUCATION

Trout Fishing Application – Performed QAQC for an application that the Divisions Bureau of GIS is working on to aid anglers with the spring trout season. This application will allow anglers to access trout fishing information from their mobile phones more easily in a map format. (Shramko)

TRAINING

National Conservation Training Center – Attended a webinar on January 12 on "Facilitating the recovery of insect communities in restored streams by increasing oviposition habitat." The talk focused on a study to determine methodology of increasing the reestablishment of aquatic insect communities after a restoration project has occurred. Emergent in-stream habitat, such as unembedded rock or woody debris, were successful in significantly increasing egg mass density and richness per stream area in restored-treated streams. Application of this methodology in NJ stream restoration projects should be given discussion. (Collenburg)

PEQUEST TROUT HATCHERY (Ed Conley)

Inventory Data

Stocking Program	Length	Average Daily Length Increase	Conversion
Spring 2023 RBT (3 months old)	2.2"	0.021	0.58
Spring 2022 RBT (15 months old)	10.0"	0.019	1.79
Fall 2022 RBT (15 months old)	10.6"	0.024	1.22

Flow Rates - December 2021

2.81 inches of precipitation fell during the month of December.

Pumping Rate Average for December was 6,441 gpm. An average of 9.28 million gallons per day was pumped during the month of December.

The potable well pumped 4,712 gallons for the month of December.

Individual Well Reading: (gallons per minute)

Well #1	630 gpm
Well #2	340 gpm
Well #3	1,490 gpm

Well #4	670 gpm
Well #5	off
Well #6	310 gpm
Well #7	3,030 gpm

Fish Culture Activities

Inventory on 2023 production stock was completed at this time. Approximately 360,000 Rainbow Trout were moved out of the nursery into the 8 available B-Line pools. They are currently being fed by hand 8 times a day 1.5 mm feed. The Nursery tanks were also reset at this time with approximately 650,000 Rainbow Trout. 112,000, 2.2" surplus fry were given to Hackettstown Hatchery for forage. Put sides on the tanks in the Nursery building to keep the larger fish from jumping out.

Fish are being fed by automatic feeder twice every hour for about 10 hours a day. The feeders are filled daily. Most fish in the nursery are on #2 crumbles feed. All tanks are being cleaned by all shifts.

Monthly inventories of the Spring 2022 production stock (48 pools) and the 2022 Fall Program fish (2 pools) were completed during this time. Feed quantities have been adjusted to regulate growth rates to reach our final goal of 10.5 inches for the Spring Stocking. These fish are being fed by the feed truck 4 times a day with 5.0 mm feed. Screens are being cleaned twice a day and basins weekly.

Approximately 46,000 pounds of feed was fed during this time.

Hygiene

Weekly catch basin and aerator building cleaning was completed as scheduled.

The iodine net/brush dip buckets were changed approximately every 3 days to keep up with the hatchery hygiene plan.

Head ends and lower ends of the raceways were vacuumed to remove a buildup of algae and moss. The aerator wheel area of the I-line was vacuumed to remove built up fish waste and decomposing algae.

Floor disinfectant baths were changed on a regular weekly schedule or as needed.

Treatment Plant

Submitted monthly discharge reports, filed any applicable paperwork, and met with the treatment plant operator.

Weekly treatment plant checks including, wastewater testing, chlorine levels, and domestic pit flow were performed. Set-up and collected composite sample for pick up on the 3rd Wednesday of the month.

Coordinated the pumping, loading, and spreading of 11,000 gals of fish waste to the Pequest WMA. A total of 11 loads were spread to Field #13 in December.

Performed preventative maintenance on treatment plant pumps, motors, greased bearings, and gears, and changed oil in blower motors.

Minor Vehicle and Equipment Maintenance

Coordinated and assisted in the maintenance of 6 in-hatchery vehicles, performed minor vehicle maintenance.

Maintained and submitted monthly mileage report for 16 hatchery vehicles.

Performed weekly site check of both gasoline and diesel fuel levels.

Two large stocking trucks went for Annual Inspections at Cory Bros., Inc.

One large stocking truck went to Petty's Good Year for a tire replacement.

Put snowplows on trucks.

Pequest Mechanical Maintenance/Alarms

Maintenance was completed by TGM Services on the boilers in the Maintenance Building.

Replaced two light heads on the lower raceways with new units.

Monthly diesel test of the generators and alarm panel was performed.

Checked domestic UV Unit.

Miscellaneous Activities

Roofers made to make final repairs to flat roof and main roof on the administrative building on 12/15/21.

Scheduled personnel to cover various vacant shifts during the Holiday season.

Seasonal position interviews have been concluded and packets have been sent in for the upcoming Spring Trout stocking season.

Submitted Quarterly Water Diversion Reports.

New Affirmative Action/ Equal Opportunity Forms are being sent to vendors that need to be completed.

In the process of setting account up with a new contract vendor for bottled and bulk gases after old contract ended.

Plowing and clean-up from a winter storm on 1/7/22.

There were no reported problems with trespassers by the night watchmen. The Information and Education Building remains closed to the public.

HACKETTSTOWN STATE FISH HATCHERY (Craig Lemon)

Intensive Culture (Inventory)

Species	**# Fish**	**Avg"**
Landlocked Salmon	3,200	6.5"
Largemouth Bass	4,000	3.8"
Mosquitofish	50,000	1.0"

Stocking Totals (December 15 – January 14)
No Stocking during this period.

Intensive Culture
Landlocked Salmon
Currently culturing 3,200 fish about 6.5-inches long in two 2,000-gallon tanks. Staff are cleaning and feeding them daily. These fish will be grown intensively until early November of 2022 and stocked when they reach 14-16 inches.

Largemouth Bass
Currently culturing 4,000 fish about 3.8 inches long in one 1,000-gallon tank. They are in 52-degree spring water and being fed live forage. This will be our first attempt at overwintering these fish intensively. Reasoning behind this is to eliminate early Spring bird predation in hatchery ponds. Plans are for these fish to meet Regional Biologists requests for 6-9" fish in 2022.

Mosquitofish
Currently culturing about 50,000 Gambusia in two 1,000-gallon tanks. They are being fed a dry feed diet.

General Hatchery Operations
Staff begin the day cleaning all tanks in the Intensive Culture Building. All the fish feeders are filled with proper size feed for the size and species in the tanks and all the feeders are set off to make sure they are feeding the correct amount. Feeders run 24 hours a day so it is critical to be sure they are functioning correctly. Weight counts are done weekly to measure fish growth and

inventories are performed when fish are being moved from tank to tank. Water flows, temperatures, and dissolved oxygen readings are performed weekly to check on water quality. Pond screens and water flows are checked and adjusted daily. Water flows and levels have been adjusted for the winter season.

Budget, Purchasing, PO's, CBT, CBTM

The CBTM Project for dredging the Old Education Pond has been finished up and we are waiting for the final couple of invoices to be paid to close the project out. The pond has already been refilled and fish have been stocked in it for the winter. Met virtually with DPMC staff and architects regarding the CBT Project to replace the Maintenance Garage. Larry Tutela has been assigned as the new project manager. A consultant has been picked for the job and a design kickoff meeting will be scheduled in the next couple of weeks. Clint Decker and Alarm Company representatives have been discussing alarm parameters and a timetable for system update also a CBT project. Received a PO for dredging the 5-Acre Pond.

Maintenance of Buildings and Equipment

Staff have been building and repairing plugs, slides, and screens to be used in the extensive ponds next year. All the fish feeders in the intensive building have been cleaned and repaired. Staff are replacing a couple of old feeders that have been troublesome with new ones. All the nets and dipnets were cleaned, repaired, and inventoried. New replacement nets have been ordered. Boots and raingear were inventoried, and new gear was ordered to fill in missing sizes.

Grounds Maintenance

Staff spent a week mowing off a couple of areas with the John Deere tractor and brush hog attachment. Plowed and shoveled snow after a few small storms. Salted all walkways.

Information & Education.

Participated in the Division's Social Media creation "GoFishFriday". This Friday's post will be the 34th post in the series targeting angler catches and the Division's fisheries programs. Hopes are to make it a year-round bragging catch following the seasons and the fish that are biting that week. Ice fishing season has kicked off and we are receiving lots of great angler photos. Incorporated an ice safety segment in the most recent post.

Seasonal Job Interviews

We have contacted and interviewed a few new potential employees as a couple of our long time seasonals have moved on to new jobs. Interviews went well and Nancy Geiger is working with the applicants on filling out the paperwork.

Maintenance (Jeffries)

Picked up and dropped off SG20120, SG22843, SG30397, and the tool truck at Smith Motors for oil changes and any work that they found necessary. Changed over the photocell system to a clock timer system on the back building exterior lighting. Called TGM Heating in to replace a fire switch on the back shop heating unit. Finished up a welding job on the back a tank truck SG20120. Serviced the Husqvarna UTV and replaced the front tires. Serviced the small John Deere tractor. Purchased steel from Ed's Trading Post to repair the carving blade on the Koehring Excavator and repair a couple of pond flumes. Performed a diesel run at the Pequest Hatchery.