



BUREAU OF FRESHWATER FISHERIES MONTHLY REPORT



February 14, 2021 – March 13, 2021

Lisa Barno, Assistant Director
Craig Lemon, Superintendent
Edward Conley, Superintendent
Shawn Crouse, Supervising Biologist

Christopher Smith, Principal Fisheries Biologist

Dominick Mercurio, Crew Supervisor Bldg. Maintenance
Tyler Tresslar, Crew Supervisor, WW

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

Thomas Bissonnette, Technician II
Nicholas Healy, 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

Grace Johnson, Wildlife Worker

Steve Jeffries, Repairer

Nancy Geiger, Agency Services Rep
Elizabeth O'Neill, Administrative Analyst

Seasonals: Steve Jefferies, Kate Ayers, Karl Lightner, Jordan Allen, Joseph Citro, Justin Rozema, Nick Cornine, Travis Nitko, and Christian Nitko.

PEQUEST TROUT HATCHERY (Conley)

Inventory Data

<u>Stocking Program</u>	<u>Length</u>	<u>Average Daily Length Increase</u>	<u>Conversion</u>
Spring 2022 RBT (5 months old)	3.5"	.024	0.95
Spring 2021 RBT (17 months old)	10.8"	.014	2.48
Fall 2021 RBT (17 months old)	11.1"	.007	1.62

Flow Rates – February 2021

4.47 inches of precipitation fell during the month of February.

Pumping Rate Average for February was 6550 gpm. An average of 9.44 million gallons per day was pumped during the month of February.

The potable well pumped 4,212 gallons for the month of February.

Fish Culture Activities

Inventory of the 2022 production stock in the nursery was completed at this time. All fish are being fed by automatic feeder twice every hour for about 10 hours a day. The feeders are being filled daily with 2.0 mm feed. All tanks are still being cleaned by all shifts and flows were adjusted. The B-line raceways were also inventoried. They are currently being fed by feed truck 4 times a day 2.0 mm feed.

Monthly inventories of the Spring 2021 production stock (48 pools) and the 2021 Fall Program fish (2 pools) were completed during this time period. Feed quantities have been adjusted to regulate growth rates to reach and maintain our final goal 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.

Over a 1000 fish were tagged for the Hook a Winner Program which will be stocked during pre-season stocking beginning on March 15th, 2021.

Approximately 48,000 pounds of feed was fed during this time period.

Hatchery flows were adjusted during this period and dissolved oxygen levels are being monitored.

Hygiene

The iodine net/brush dip buckets were changed every 3 days or so to keep up with the hatchery hygiene plan. Weekly catch basin and aerator building cleaning was completed as scheduled. Head ends as well as lower ends of the raceways were vacuumed and scraped 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 transfer of 6900 gals of fish waste to a licensed contractor, since we were unable to spread in the fields due to the snow depth during February.

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.

Oxygen was been ordered and delivered for the stocking trucks.

Trucks have been prepared for the upcoming stocking season which will begin on March 15, 2021. Staff have made sure tanks and oxygen set-ups are in good working order.

Coordinated, scheduled, and transported distribution trucks for inspections, preventative maintenance, and repairs with a certified repair facility.

Sent Truck 682 to Petty's Good Year for tires to be replaced for the stocking season.

Finished repairing nets and equipment for the upcoming stocking season.

A pickup was taken to Smith Motors for repairs after a hard winter of snow plowing.

Miscellaneous Activities

Plowed and cleaned-up from one winter storm during this time period.

This year's Trout Meeting was Virtual on March 6th with a very good turn-out. Presentations were given and information provided on trout stocking, which will also be available on the web for the upcoming stocking season.

The UV treatment system on the domestic waterline was taken off-line with Safe Drinking Water. Bottled water is still being provided.

The domestic waterline project has begun in which the line is being upgraded. Work so far has mostly taken place around the lighthouse and the back-parking area.

The Pequest TCA was cleared of debris where we were able to get for anticipation of stocking. A few sections still have snow but will hopefully be cleared soon.

There were no reported problems with trespassers by the night watchmen. The Information & Education Building remains closed due to COVID19.

FISHERIES MANAGEMENT (Shawn Crouse)

2021 Spring Trout Stocking – Due to ongoing pandemic, significant staff time has been invested in making sure the accelerated stocking season runs as smoothly as possible. Actions have included but are not limited to coordinating with Division Hatchery and Land Management staff to develop the trout stocking schedule, reviewing stocking points, coordinating volunteers for stocking, preparing hatchery loading cards and driver load sheets, assisting in posting modified Trout Stocking signs, providing public information both online and directly to constituents, preparing for and participating in the virtual Annual Trout Stocking Meeting, and perpetual troubleshooting. (Shramko and staff)

Warmwater and Coolwater Stocking – Determined the waters, species, and stocking rates of warmwater and coolwater species requested to be stocked by the Hackettstown Hatchery. This list, in spreadsheet form, was completed and provided to staff on March 5. (Smith, Collenburg, and Crouse)

Coldwater Management Plan – Continued to work on the “Management of Wild Trout” section of the plan. (Collenburg)

Warmwater Management Plan - Continuing to develop and update Bluegill and Crappie management sections which will be included within the Warmwater Fisheries Management Plan. (Boehm)

Freshwater Fisheries Status Update - Reviewed fisheries data collected since the 2016 Freshwater Fishes Delphi status assessment, which resulted in the conclusion that there is no reason to amend the proposed status of New Jersey's native freshwater fishes. (Crouse)

Invasive Species Management – Assisted with collecting and populating the invasive species spreadsheet for the NJDEP Invasive Species Internal Workgroup. The spreadsheet includes current and recent sampling and monitoring efforts and proposed projects. In addition, high priority potentially dangerous fish species were identified. (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 managing stream temperature data from the Brook Trout Strongholds Project. (Collenburg)

Data Share – The BFF contributed continuous temperature data from 155 sites that was collected between 2018 and 2020 to USGS Ecosheds. Ecosheds will not only be a convenient warehouse for data to share with others in the scientific community, but USGS uses this data for stream temperature model development and to provide guidance to states on the state of Brook Trout in individual watersheds. USGS has been involved

in the Eastern Brook Trout Joint Venture providing predictive models for brook trout occurrence and suitable habitat. Modeling in NJ based on preliminary observed-predicted comparisons of stream temperature has been inaccurate and usefulness of the regional models for persistence of brook trout may not be high because of the highly fragmented nature of brook trout populations and many waters already sampled. However, USGS provides modeling and results and supplying our data may improve model calibration. (Collenburg)

Stormwater Analysis –Met with the Division of Research and Science on February 26 to discuss analysis of stormwater data related to land use and biological impacts. It was decided to utilize easily accessible land use data sets from 2012 and run logistic regression models to characterize impacts of land cover characteristics on storm water and trout populations in NJ. (Collenburg)

TECHNICAL ASSISTANCE

Statewide Dam Removal Partnership – Biologists Smith and Boehm participated in a Community Outreach Information Session with the Statewide Dam Removal Partnership, on March 9. The information session was titled “Community Engagement: The Key to a Successful Dam Removal Project”. Raritan Headwaters staff led the presentation. (Smith and Boehm)

Columbia Lake Dam Removal – Multiple phone conversations and onsite meetings about the new stream channel and the ongoing high erosion issues in the former lakebed. (Shramko)

County Line Dam Meeting (Warren/Sussex) - A virtual meeting was held February 24 among DFW staff to discuss the project being proposed by the Nature Conservancy to remove/modify the County Line Dam along the Paulins Kill. Minimal potential benefits to anadromous fisheries and negative impacts to freshwater mussels were discussed, along with the concern that this dam may not even be a barrier to anadromous fishes. (Freshwater Fisheries and ENSP staff)

Bonsal Nature Preserve – Provided technical guidance on introduction of Brook Trout in the Bonsal Nature Preserve located on the Third River in Brookdale. The data does not currently support introduction of Brook Trout based on storm flow impacts that would create lethal temperature conditions for Brook Trout as well as bring poor water quality and alter physical habitat in-stream. Impervious cover upstream and including the Bonsal preserve is 23.4%. The continuous temperature data reflects these impacts. A temperature surge event on 7/28 caused an increase of 5.8 degrees Celsius was detected (from pre-storm conditions) and exceeded 27 degrees Celsius. It’s important to note that this is only temperature data, however, it’s a signal that major storms can wash toxicants and pollutants into the stream and drastically alter the habitat conditions. During regular stream flows the conditions seem adequate and some modeling was used to predict that if without these events the maximum weekly average temperature would be around 20-21 degrees Celsius which is fairly typical of NJ trout streams (Brook Trout limit is ~23 degrees C) that have moderate to low groundwater influence. Unfortunately, we would not be able to support trout being introduced. The recommendation to Bonsal Nature Preserve is to work with the town and any other local watershed groups to inform them of the importance of managing for these types of impacts. Riparian buffers, rain gardens, rain barrels, fixing or improving retention basins are all

small to big things that can make a large difference in improving the water quality in the Third River. (Collenburg)

Greenwood Lake Water Level Management Meeting – BFF met with NJ State Parks on February 18 to discuss a newer version of the water level management plan. The plan is still being revised and protocol to determine the catalyst for major actions or implemented changes needs to be determined. (Barno/Collenburg)

Hammonton Lake Committee Meeting - Attended a Hammonton Lake Committee meeting via Zoom on March 8. Provided insight on the status of the lake's warmwater fisheries, aquatic vegetation control activities, and how water quality changes can affect fish populations. Stockton professors presented water quality (road salts, nitrates, and fecal coliform measurements), aquatic vegetation and macroinvertebrate survey results for the lake. The university will continue monitoring efforts in 2021. Currently, water quality is not believed to be having a negative impact on the lake's recreational fish population. Relatively high fecal coliform levels continue to be a concern of the committee. (Boehm)

Category 1 (C1) Work Group Meeting – The BFF attended a meeting on February 17 to share progress on proposed definitions and alterations to the C1 workgroup recommendation document. (Crouse/Collenburg)

NEAFWA Conference - Organized and submitted a presenter schedule for the “Restoring Aquatic Habitat Connectivity Symposium” which is part of the upcoming NEAFWA virtual conference in April. (Boehm)

Van Campens Brook (Warren) and Brass Castle Creek (Warren) Projects - Significant projects are occurring along both of these waters that may impact the habitat, water quality, and fish populations along these Wild Trout Streams. Concerns are being reported to various DEP programs, in an attempt to minimize negative impacts. (Shramko)

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 and Fish Stocking applications and contacted applicants as necessary to obtain required information. These permit applications are being received at an increasing rate as the spring season approaches. (staff)

WMA Fishing Tournament Permits – The Division started accepting applications for the 2021 fishing tournament season. A total of 137 applications for Wildlife Management Area fishing tournament permits have been received. Permits have been issued for events to be held in March. (Smith)

OTHER

Freshwater Fisheries Forum - Due to continuing pandemic circumstances the 2021 Fisheries Forums were combined into one that was held virtually ([via GoToMeeting](#)) on February 27 at 10:00 a.m. This year's presentations included an update on the Warmwater and Coldwater Fisheries Management Plans (Shawn Crouse), a Review of Warmwater Fish Production

Activities from 2020 (Tyler Tresslar), and a presentation of Potential Impacts of Climate Change on Freshwater Fish (Collenburg). The presentations was followed by an open public question period, questions were received primarily through the chat bar and were answered by staff via video feed. The meeting was well-attended with over 120 participants, approximately 20 of which were staff. (staff)

Annual Trout Meeting - The 2021 Annual Trout Meeting was held virtually on March 6 from 10:00am until noon. Public participation was high and unfortunately exceeded the 150-person capacity of the online platform (approximately 10 of which were staff). Staff presentations included a 2020 Stocking Summaries and 2021 Pequest Trout Hatchery Production (Ed Conley) and a presentation on adjustments to the 2021 spring trout stocking program, including the accelerated stocking plan and important date changes (Ross Shramko). The meeting concluded with a comment period intended to engage in meaningful discussion and ask questions of the biologists and fish culture staff. (staff)

HACKETTSTOWN STATE FISH HATCHERY (Craig Lemon)

Intensive Culture (Inventory)

<u>Species</u>	<u># Fish</u>	<u>Avg.”</u>
Muskellunge	4,600	11.2”
Landlocked Salmon	3,200	8.0”
Mosquitofish	30,000	1.0”

Stocking Totals (February 15 – March 14)

No stocking during this period.

Intensive Culture

Muskellunge - Currently culturing 4,600 Muskellunge in two 2,000-gallon tanks. These fish are averaging 11.2 inches currently. These fish will be grown on forage until stocking in April.

Landlocked Salmon - Currently culturing 3,200 fish about 8.0-inches. After last year’s fish were stocked, the crew split the 3,200 new fish into two 2,000-gallon tanks. Staff are cleaning and feeding them daily. These fish will be grown intensively until November and stocked when they reach 16-18 inches.

Virtual Fisheries Forum

Staff prepared a 15-minute Power Point presentation to be given at the combined North/South forum. The presentation detailed the work and production at the Hackettstown Hatchery in 2020. Tyler Tresslar presented it.

INAD

Enrolled the hatchery in the 2021 Federal INAD Program. We enrolled in the Chloramine T and Medicated Feed/OTC programs, but did not enroll in the CCP INAD as we will not be trapnetting Muskellunge in 2020. The USFWS waived all enrollment fees for 2021.

Budget, Purchasing, PO’s

Contacted multiple State Contract Vendors to get price quotes on replacing the leaky fuel tank on SG22384, the hatchery’s big stocking truck. Submitted PB119 and waiting on the PO. Waiting on a final quote for the repair of a 50-foot piece of sidewalk on Grand Avenue. Placed orders for fish food, and chemicals. Finalized numbers from last year’s budget.

Maintenance of Buildings and Equipment

Fluids and filters were all changed on the hatchery SUV’s and boats. All garage, parking lots, pavement and work areas were cleaned up after the snow melt. Scheduled inspections for fire extinguishers, and vehicle lift. Brian Adams performed an inspection on the vacant hatchery house.

Maintenance of Ponds and Grounds

Staff cleaned out several flow control ditches using the excavator, tractor and pitchforks.

Cleaned up downed limbs in the East Hatchery. Working with the excavator and chains to pull stumps in concrete pools 40 and 41.

Pond Filling and Flume Work

Filled the Spring Hole pond to hold Northern Pike broodstock after spawning for the 30-day Tricaine quarantine. Lowered concrete pools 39, 40, and 41 to allow for boarding and filling. Prepared gear to begin filling ponds 43, 85, and 5-acre. These early ponds will be set up with Fathead Minnows for spawning this spring. Filling these ponds requires a lot of work to get ditches full, water control structures dug out and boarded up, and correct size screens to be wedged in place. Depending on the size of the pond, it takes between one day and two weeks for them to fill up. Switched outflow in pond 74 to the Silver Dollar pond to allow for the Old Education pond to drain and dry. Plans are to dredge the pond before it is refilled.

Intensive Fish Culture Building & System Work

The 68-degree Intensive Recirculation System was started up March 8th in anticipation of Northern Pike trapnetting. The system is started at least a week in advance to work the bugs out of the system which has set idle since last November 1st. All boilers, pumps, drum filters, biofilters, and oxygen equipment was started. A leak was spotted in boiler system piping and was bypassed to keep the loop up and running. Miller & Chitty is scheduled to do the repair and service both boilers March 17th. During startup Dom spotted an oxygen leak that has since been repaired.

COVID 19 Update

All personnel are performing daily checks at the door when entering the facility. All personnel areas continue to be wiped down and sterilized daily. Vehicle interiors have been wiped clean. Cleaning supplies have been ordered. A preparedness plan is being developed and is being adhered to. All staff have been updated and will continue to be updated as this issue changes.

BUILDING MAINTENANCE PROGRAM (Dominick Mercurio)

Pequest Trout Hatchery

This month several days were spent getting ready for the up-coming trout stocking season, supplies were ordered, one tank was put on a land's management truck and trucks were tested for any problems. One in-hatchery truck mirror was replaced and a new taillight was installed in another in hatchery truck. The distribution truck water fill at well house number 2 was repaired. Had to clear hatchery, well road and well houses of snow again.

The contract vendor has started the replacement of the potable water line at Pequest, it has been a team effort keeping the roadway into the raceways open so we can continue normal daily fish operations.

Did full diesel run test of the whole facility. All diesels were run during this period to simulate a full power outage. All the backup systems function properly. All the alarm and control computers were rebooted. Did all monthly production well numbers, along with potable UV water numbers, well levels, monthly gallons pumped, rain fall etc.

Hackettstown State Fish Hatchery

The 68-degree water system was fired up this month, back wash pumps, water circulator pumps, heating boilers and UV filters were all turned on. The system is currently operating properly.