



## **BUREAU OF FRESHWATER FISHERIES MONTHLY REPORT**

**October 16, 2022 – November 15, 2023**



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Edward Conley, Superintendent

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Mike Leshko, Karl Lightner, Brooke Wakefoose, and Cheryl Weeks

## **FISHERIES MANAGEMENT**

**Invasive Species Management Plan Development** – A draft invasive species management plan is being finalized. The plan was shared with members of the AISMP Work Group and identified additional NJDEP Fish and Wildlife staff that were not part of the original development process. Staff were given approximately two weeks to review the plan and provide comments. (Smith and Crouse, F-48-R)

### **Warmwater Fisheries Management**

**Davis Mill Pond (Cumberland)** – A boat electrofishing survey was completed at Davis Mill Pond, Cumberland County on 10/24/23 to assess the Largemouth Bass population. The pond has been sampled numerous times in the past and had a lake inventory completed in the early 2000's. The pond is a favorite among local bass anglers in southern New Jersey. Previous sampling suggests the population may have been impacted by LMBV and possibly over harvest. The population appears to be rebounding based on the last two surveys which may be attributed to supplemental stocking that was done. A total of 55 bass were collected during the 1.06-hour daytime survey. Though no standard average catch rate has been developed, the catch rate was good at 51 bass/hour based on other surveys. The population distribution appears good with 56% of individuals collected measuring over 12 inches and 37% over 15 inches. The largest fish collected measured 21" and 5.5 lbs. (Smith, F-48-R)

**Lake Lenape (Atlantic)** – Lake Lenape is a 350-acre impoundment of the Great Egg Harbor River located in the town of Mays Landing. The dam has a fish ladder which provides successful passage of anadromous river herring. Atlantic County Parks maintains a public boat ramp for angler access. A daytime boat electrofishing survey was conducted on 11/2/2023 to assess the Largemouth Bass population. A total of 34 bass were collected during the 1.92 hour survey resulting in a low catch rate of 17 bass/hour. The catch rate may have been slightly impacted as the lake had been lowered 2-3 feet at the time of sampling. A Largemouth Bass measuring 21 inches and weighing 5.64lbs was the largest collected. Survey results continue to indicate a low-density bass population consisting of larger individuals. This is most likely due to the limited amount of habitat within the lake. The majority of suitable habitat is found in the upper end of the lake which is influenced by the Great Egg Harbor River. Consistent winter drawdowns have significantly reduced shoreline habitat and aquatic vegetation within the lower lake. Artificial habitat in the form of brush piles have been deployed in the past. Unfortunately, they don't offer a permanent solution as they break down over time and need to be replenished to remain effective. However, they remain an option going forward to improve fishing for anglers. The forage base is adequate and made up of Bluegill, Golden Shiner, and Gizzard Shad. Monitoring of the Largemouth Bass population will continue. Supplemental stocking of Largemouth Bass to bolster the population should continue as Lake Lenape is a popular recreational fishery. (Boehm, F-48-R)

**Lake Shenandoah (Ocean)** – Lake Shenandoah is a 50-acre impoundment of the Metedeconk River located in Lakewood Township and is part of the Ocean County Parks system. The lake is a trout stocked water that also receives Channel Catfish stockings. A boat ramp, numerous fishing docks, and plentiful shoreline openings provide abundant angler access. A fish ladder is present and young-of-the-year (YOY) Blueback Herring were observed with several individuals

collected during sampling for identification. A daytime boat electrofishing survey was conducted on October 25, 2023 to evaluate the Largemouth Bass population. Unfortunately, very few bass were collected during the approximately one-hour survey. Given the small sample size, more data are needed before appropriate analysis and management recommendations can be made. Worth noting was the lack of shallow shoreline habitat, with most of the lake's littoral zone being quite barren. Quality habitat in the form of aquatic vegetation and coarse woody debris was very limited. The low number of Largemouth Bass collected is most likely attributed to these conditions causing the fish to not associate with the bank and utilize deeper, offshore areas of the lake where they are less susceptible to electrofishing methods. Two Largemouth Bass over 4lbs were collected. The lake was last sampled on October 3, 2018 with similar results/conditions encountered. Shenandoah received fingerling Largemouth Bass stockings in 2020 and 2021 (1,875 and 2,287 fish respectively). Still not enough is known about the Largemouth Bass fishery and a follow up spring electrofishing survey is recommended to better assess the population and past stocking efforts. Lastly, the anadromous river herring should be given significant consideration when making any fisheries management decisions. (Boehm, F-48-R)

**Lefferts Lake (Monmouth)** – Lefferts Lake is a 68-acre impoundment of Matawan Creek. The lake was last sampled in 2016 when a seining survey was conducted, and again in 1998 via boat electrofishing. Both surveys indicate a struggling fish population with poor recreational fishing opportunities. Results consisted of extremely low numbers of small, mostly sub-legal (<12") Largemouth Bass combined with inadequate levels of reproduction. A daytime boat electrofishing survey to assess the Largemouth Bass population was conducted on 10/16/2023 after several reports of poor fishing by local anglers were received. Total electrofishing time was 1 hour with only 9 Largemouth Bass collected, of which only 4 were greater than 12 inches. Low numbers of Bluegill/Pumpkinseed, Black Crappie, Yellow Perch, Chain Pickerel, and Golden Shiner were also observed. Aquatic vegetation in the form of lowly leaf water milfoil was abundant along the shoreline, and especially prevalent above the Highway 34 bridge. Water chemistry was taken at the boat ramp and above the 34 bridge. Of note was the stark difference in pH between the two locations. At the boat ramp (adjacent to the spillway) it measured 6.80, while up the lake above the bridge it measured 5.79. This is quite a significant change, and the low pH is causing the poor fishery. Low pH waters do not allow for productive fisheries. Most common warmwater species (bass, sunfish, crappies, and catfish) require stable pH levels between 6 and 7 to reproduce successfully and flourish. As pH decreases, becoming more acidic, reproduction becomes difficult, grow rates slow and in extreme cases becomes lethal to aquatic life. Previous surveys suggest these same conditions have persisted and are a chronic issue at Lefferts Lake. The low pH is a result of acid mineral deposits that are common in this area of the state. Unfortunately, little can be done unless the pH stabilizes to levels suitable for warmwater fish and no stocking will take place. (Boehm, F-48-R)

**Parvin Lake (Salem)** – A boat electrofishing survey was completed at Parvin Lake, Salem County on 11/3/23 to assess the bass population. Parvin Lake is managed under special *Lunker Bass Lake* regulations and is one of the most popular waterbodies in southern New Jersey. However, in recent years, changes in the parking area and boat launch fees have impacted usage. A total of 78 bass were collected during the 1.60-hour daytime survey. The catch of 48 bass/hour was good compared to previous surveys. The population is well distributed with 56%

of bass greater than 12 inches and 25% greater than 15 inches. No Gizzard Shad were observed during the survey, but anglers indicated they were present. Gizzard Shad are a vital component of the forage base. An unidentified rooted aquatic plant was present, most likely an invasive species. The combination of little rainfall and the SAV made the water extremely clear which probably lowered the catch rate. The lake continues to get shallower as the upper third of the lake is less than 2 feet of water. (Smith, F-48-R)

**Prospectown Lake (Ocean)** – A boat electrofishing survey was conducted at Prospectown Lake on 10/22 to assess the Largemouth Bass population and survey for the presence of Northern Snakeheads. This Wildlife Management Area pond is located near the heads of a tributary to Crosswicks Creek and uniquely one of few waterbodies in the state where only manually powered watercraft are permitted. A total of 32 bass were collected during the 1.40-hour daytime survey. The catch rate was 22 bass/hour and consistent with other surveys at this location. The population was not well distributed with 61% of the sampled population greater than 12 inches and only 7% of bass were greater than 15 inches. The largest bass collected measured 21.5 inches and weighed 7.31 lbs. Warmouth, a species previously not present in this waterbody, were found to be rather abundant. Warmouth are listed as one the State's Potentially Dangerous Species. Snakeheads have been reported in the lake, but none were observed. Anglers have reported catching Snakeheads below the spillway and a dead one was found near the fishing dock. (Smith, F-48-R)

**Salem Canal (Salem)** – A boat electrofishing survey was conducted at Salem Canal, Salem County on 10/19/23 to assess the Largemouth Bass and Northern Snakehead populations. A total of 31 bass and 22 Snakeheads were collected during the 1.36-hour daytime survey. The catch rate was 22 bass/hour and while this catch rate is consistent with other surveys, the catch rate seems to vary widely throughout the year at this location. The population was well distributed with 71% of the population greater than 12 inches and 52% of the population greater than 15 inches. The 22 Snakeheads ranged in size from 435 – 728 mm (17.1 – 28.7 inches). (Smith, F-48-R)

**Union Lake (Cumberland)** – A boat electrofishing survey was conducted at Union Lake on 10/18/23 to assess the bass population. A total of 31 Largemouth Bass were collected during the 1.03-hour survey. The survey was impacted by warm water temperatures and clear water. Very few fish were observed hanging around the shoreline in the lake. Most of the bass encountered were in the headwaters of the lake and in the Maurice River. Water temperatures were still hovering in the low 60s and fish were relating to offshore habitat. The catch rate was 29 bass/hour which is an average catch for this waterbody. The population was not very well distributed with 63% of the population greater than 12 inches and 16% greater than 15 inches. The population was not well represented and should be resampled during the spring 2024. Anglers reported catch good numbers of small Smallmouth Bass, but none were observed. These fish would have been from the most recent stocking in 2022. (Smith, F-48-R)

### **Coolwater Fisheries Management**

**Spruce Run Reservoir (Hunterdon) Hybrid Striped Bass Monitoring** - Spruce Run Reservoir is one of three waterbodies currently stocked with Hybrid Striped Bass to provide diverse recreational angling opportunities. To monitor the status of the stocking program, two 125' x 6'

experimental gillnets were deployed for two consecutive nights from 10/16/23 - 10/18/23. In total, 16 Hybrid Striped Bass were captured. While this number is significantly lower than the 47 captured during sampling efforts conducted in 2015, reservoir elevation was significantly different in each survey. In 2023, Spruce Run Reservoir was operating at approximately 16ft higher (Reservoir level ~272ft) in elevation than in 2015 (~256ft), increasing the depth at historical set locations and causing difficulty in finding and capturing fish with the gillnets. This, combined with anecdotal evidence of high angler satisfaction with the fishery, suggests that the Hybrid Striped Bass fishery here remains strong. Data analysis is ongoing. (Rozema, F-48-R)

### **Coldwater Fisheries Management**

**Merrill Creek Reservoir (Warren) Lake Trout Monitoring** - Merrill Creek Reservoir is one of two reservoirs in New Jersey containing wild populations of Lake Trout. Historically, this privately-owned, public-accessible reservoir's fisheries were monitored through Normandeau Associates, however NJDEP Fish and Wildlife has taken over monitoring efforts since 2022. During 2022 monitoring efforts for Lake Trout, a trending decline in relative weights (an indicator of population health) was noted. This year's sampling was conducted to collect additional data to determine if additional regulatory changes are necessary to address the declining population health. Four 250' x 6' experimental gillnets containing various mesh sizes were set over two nights from 10/30/23 - 11/1/23 in an effort to collect smaller-sized, immature Lake Trout. An additional four 300' x 6' multifilament gillnets containing 6" stretch mesh were also set over two nights from 11/6/23 - 11/8/23 targeting mature adult Lake Trout. In total, 28 Lake Trout were captured in the experimental nets and 56 were captured in the multifilament nets. Data analysis is ongoing. (Rozema, F-48-R)

**Round Valley Reservoir (Hunterdon) Lake Trout Monitoring**- Round Valley Reservoir is one of two reservoirs in New Jersey containing wild populations of Lake Trout. During routine monitoring during 2022, the relative weights (an indicator of population) of Lake Trout captured were trending lower than typical, suggesting that the health of the population is declining due to a lack of prey availability. This year's sampling was conducted to collect additional data to determine if additional regulatory changes are necessary to address the declining population health. Four 250' x 6' experimental gillnets containing various mesh sizes were set over two nights from 10/23/23 - 10/25/23 in an effort to collect smaller-sized, immature Lake Trout. An additional four 300' x 6' multifilament gillnets containing 6" stretch mesh were also set over two nights from 11/13/23 - 11/16/23 targeting mature adult Lake Trout. In total, 25 Lake Trout were captured in the experimental nets and 80 were captured in the multifilament nets. Data analysis is ongoing. (Rozema, F-48-R)

**Multi-Stressor Study** – NJDEP's Division of Science and Research's proposal for a study to determine the role anthropogenic stressors (contaminants, degraded water quality) have on sensitive fish populations in Northern New Jersey was accepted with partnership with NJFW and the Bureau of Freshwater and Biological Monitoring (BFBM). With the recent discovery of the role of tire anti-degradant 6 p-Phenylenediamine (6PPD; and degradant byproducts) in urban runoff mortality syndrome in coho salmon, there is an increased interest how this chemical interacts with other salmonids across the country. While trout species in New Jersey are not as acutely sensitive to these anti-degradants as coho salmon, additional stress from degraded water quality and acutely toxic compounds in run-off may contribute to a multi-stressor scenario.

NJFW has committed to stream temperature monitoring on the study sites along with conducting electrofishing surveys on the current fish assemblage. Work completed includes:

- Between May 23<sup>rd</sup> and June 9<sup>th</sup> a total of 22 sites were selected to install continuous stream temperature monitors. Streams included in the study, Rinehart Brook, Sun Valley Brook, Raritan River South Branch (trib.)(N of Drakestown), and Raritan River South Branch (trib.)(Drakestown)
- Standardized backpack electrofishing surveys were completed in August to supply fish population data for the analysis.
- Assistance was given to DSR for collection of water quality samples in the field. Preliminary analysis detected 6PPD in all but two sites.
- Continuous stream temperature loggers are in the process of being collected in the field for later download and analysis. (Collenburg, F-48-R)

**Stormwater Impacts on Wild Trout** – Between 2018 and 2020 New Jersey Fish and Wildlife's (NJFW) continuous stream temperature monitoring network, that was used to identify Brook Trout resilient habitat to climate change in NJ, was analyzed for presence of water temperature (T~w~) surges as defined as a 2°C increase of water temperature, or greater, in a 30-minute period. Of the 227 sites analyzed between 2018 and 2020, 28 individual sites (8.1%), all within headwater streams, had at least one T~w~ surge and a total of 134 events identified. Additional sites were investigated in 2021 with the intention of identifying the source of, or suspected to have, stormwater impacts. Another 16 sites were added to the dataset from 2021. Additional data was collected in August and September to supplement the population metrics that were not available on all streams or stream reaches that were not sampled previously via backpack electrofishing. (Collenburg, F-48-R)

**eDNA/Genetic work for potential Allegheny Pearl Dace** – Worked towards developing objectives to identify the strain of Pearl Dace that was discovered in Sussex County, a species not found in NJ in many years. New York DEC has been working on identifying strains of Allegheny Pearl Dace, Northern Pearl Dace, and their hybrids and potential collaboration with NY may shed light onto the origins and species that was documented this past spring in NJ. In November/December fin clips will be collected to provide genetic information from this population soon. (Collenburg)

**Staff** - Assistant Biologist Maria Berezin-Dowling's last day was 10/4/23 after resigning. We wish her well.

### **TECHNICAL ASSISTANCE**

**ENSAC meeting** – Attended the November 15<sup>th</sup> meeting for the Endangered and Nongame Species Advisory Committee and gave a presentation on the four species of fish that have been recommended for addition to the list of endangered species, and the six species recommended for special concern on the nongame list. (Collenburg)

**FishTrack Database** – The current Access database that holds data for the Bureau of Freshwater Fisheries has become a major issue creating inefficiencies in time spent entering, managing, analyzing, and procuring data. This is likely caused by the transfer or querying of large amounts of information from the Garden State Network, Zscaler, and to the offices in Lebanon.

Collaboration between NJDEP's IT department and BFF determined that a transfer of the backend to Microsoft SQL would greatly increase the speeds at which data is accessed. This project will take place in January or February of 2024 when the bulk of data entry is completed from 2023. (Collenburg)

**Landscape Project** – Significant time was spent conducting research on movement and dispersal on freshwater fish species that are candidates for listing as Endangered, Threatened, or Special Concern. This research will aid in the development of Species Occurrence Areas and incorporating occurrences of these species into NJDEP's Landscape Project with the eventual goal of adding protections to freshwater fish species in NJ that are soon to be proposed as Endangered, Threatened, or Special Concern. (Collenburg)

**MAPAIS Meeting** – The fall MAPAIS meeting was held in North Carolina on 11/14 and 11/15 with a virtual attendance option. The meeting was held jointly with the Gulf and South Atlantic Regional Panel. Many interesting presentations were given by participants. It was especially interesting hearing the state highlight reports from outside our region. The spring meeting will again be held in Annapolis, MD. (Smith, F-48-R)

**Spruce Run and Round Valley Reservoir Coordination Meeting** – On November 1<sup>st</sup> attended this multi-agency meeting including staff from the New Jersey Water Supply Authority, State Park Service, State Park Police, and Fish and Wildlife to discuss topics relevant to Spruce Run and Round Valley Reservoirs for coordination and communication among the partners. (Collenburg)

**Round Valley Trout Association Meeting**- Participated in a joint meeting between Round Valley Trout Association and NJDEP Fish and Wildlife discussing recent data collected and future steps/projects involving Round Valley Reservoir. Topics discussed include sustainability of the baitfish population, potential liberalization of Lake Trout regulations, and a potential habitat project. (Crouse, Collenburg, & Rozema)

**Atlantic Coast River Herring Collaborative Forum 10/30/23** - Attended the "River Herring Forum", which is an information exchange venue to bring together river herring practitioners, managers, researchers, and community groups from across the species range. This forum is co-chaired by NOAA Fisheries and Atlantic States Marine Fisheries (ASMFC) staff. The purpose of the River Herring Forum is to promote the conservation of the species, support information exchange, and encourage collaboration. The River Herring Forum meets virtually, biannually each spring and fall. Several presentations were given. Noteworthy were how changing environmental conditions associated with climate change have affected Blueback Herring runs in the Connecticut River. Shorter winters seem to be causing earlier migrations, and higher water temperatures may lead to lower juvenile numbers/lengths possibly due to increased energetic needs. Another suggested eDNA data can be used to make predictions of fish abundance which is encouraging as the scope of this technology continues to expand. (Boehm)

**Fish Passage Training** - Received fish passage training on 10/17/23 in Easton, PA. provided by USFWS Fish Passage Engineers. Topics presented included dam removal challenges, post removal stream channel restoration design methods, various fish ways and the variables

associated with their effectiveness, fish movement and fatigue, gauging stations, case studies and monitoring. (Boehm)

**Bloomsbury Dam (Hunterdon)** – Reviewed removal plans from an anadromous fish perspective to ensure fish passage will be provided upon completion of removal. (Boehm)

## **INFORMATION AND EDUCATION**

**Free Fishing Day Events - Pilot Stocking Program** - On October 21<sup>st</sup>, 2023, New Jersey DEP Fish and Wildlife participated in a total of 3 events statewide as part of a pilot stocking program centered around Free Fishing Days. The Bureau of Freshwater Fisheries' Hackettstown Hatchery stocked Hughes Lake (Passaic), Roosevelt Pond (Burlington), and Rowands Pond (Camden) early on during the week of October 16<sup>th</sup> with large, catchable-sized fish consisting of Rainbow Trout, Hybrid Striped Bass, Largemouth Bass and Channel Catfish (Table 1). Bureau of Information and Education staff planned, attended, and successfully implemented the Community Fishing Event at Rowands Pond (NJFW WMA Property). The Bureau of Law Enforcement and Freshwater Fisheries also participated at the events by providing additional staff to aid in fishing education and evaluating success. Summaries for each event can be found below.

**Table 1.** Number of fish and average size/weight of fish stocked of each species at the three waterbodies selected as part of the pilot stocking program. \*Hybrid Striped Bass were not stocked in Hughes Lake due to concerns over escapement and potential effects on wild Striped Bass.

<b>Species</b>	<b>Hughes Lake</b>	<b>Roosevelt Pond</b>	<b>Rowands Pond</b>
<b>Rainbow Trout</b> (4 lbs.)	80	60	60
<b>Hybrid Striped Bass</b> (18-22")	0*	25	25
<b>Largemouth Bass</b> 20 (15-18")	35	20	20
<b>Channel Catfish</b> (22-24")	5	5	5

A few takeaways from all events can be noted. Rainbow Trout were notably the most caught species at all waterbodies. This was expected considering they were the primary species stocked at these locations this fall. Largemouth Bass and Channel Catfish, stocked more at all locations for the June 2023 Free Fishing Day in addition to the recent fall stocking, were the second and third-most reported caught.

No Hybrid Striped Bass were witnessed captured or reported caught in the days prior to the events at both Roosevelt and Rowands Pond. However, angler sentiment towards these more-elusive fish appeared to still be positive, as they generated some excitement in anglers and a desire to return to the waterbody, particularly at Roosevelt Pond.



Hackettstown Hatchery typically stocks the fish for this pilot program a few days prior to the scheduled event to allow for fish to acclimate to their new surroundings and potentially increase their catchability on the day of the event. Previous anecdotal evidence from June 2023 Free Fishing Day Events appeared to suggest fish stocked the day of the event were less likely to be caught that day than fish pre-stocked a few days prior. Anglers appeared to utilize these waterbodies and were successful between the pre-stocking for the event early on during the week of October 16 and the actual event on Saturday, October 21. Anglers at both Roosevelt and Rowands Pond were reported catching 4-fish limits of Rainbow Trout in the days prior to the event. It is unknown how much Hughes Lake was utilized prior to the event. It would be beneficial in the future to evaluate angler usage of pilot program-stocked waters for events during the pre-stocking to event timeframe to evaluate if angling pressure prior to the event can impact event success. This is particularly relevant for Rainbow Trout, which are often harvested and therefore removed from the waterbody. (Rozema, Smith, & Boehm)

**2024 Freshwater Fishing Digest** – Working closely with I&E staff, BFF staff have completed revisions for the final pass of the 2024 Freshwater Fishing Digest. It has been edited and passed on to I&E for further editing. Things are going smoothly, and we are on schedule. (staff)

**Freshwater Fishing Regulations** - Consulted and reviewed documents, regulations and data sets with Office of Fish and Wildlife Information Systems staff on the ongoing development of their freshwater fishing regulations and anadromous fishes timing restriction applications. (Rozema & Boehm)

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### **PEQUEST TROUT HATCHERY** (Ed Conley)

<u>Stocking Program</u>	<u>Length</u>	<u>Average Daily Length Increase</u>	<u>Conversion</u>
Spring 2024 RBT (13 months old)	8.4"	0.018	1.60
Fall 2024 RBT (13 months old)	9.2"	0.010	1.59
Winter 2023 RBT (25 months old)	14.2"	0.016	0.92

### **Flow Rates – October 2023**

1.74 inches of precipitation fell during the month of October.

Production Well Pumping Rate Average for October was 6,265 gpm with an average of 9.02 million gallons per day pumped during the month.

The potable well pumped 7,972 gallons for the month of October.

### **Fish Culture Activities**

The Fall Trout Stocking Program concluded on 10/18/23 with 20,670 two-year old production trout stocked along with 950 larger three-year old broodstock.



### **2023 FALL TROUT STOCKING SUMMARY** **PEQUEST TROUT HATCHERY**



	<u>#FISH</u>	<u>#LBS</u>	<u>AVG. LENGTH</u>
RBT Production II	20,670	28,001	14.2"
RBT Broodstock III	950	3363	19.2"

**TOTAL FISH FOR FALL**  
**21,620 FISH**  
**TOTAL LBS. FOR FALL**  
**31,364 LBS.**



All lots of 2025 production trout have hatched resulting in approximately 1.04 million Rainbow Trout fry. Most lots are up and now on feed. Lots 1-3 have been dropped out of the troughs into the tanks. Staff are spending more time in Nursery building cleaning as more fish hatch and go onto

feed.

10/24/23, provided 24,510 Rainbow Trout eggs to 120 schools for the Trout in the Classroom Program.

On 11/14/23 Joe Groff's from OFWH crew performed the annual trout sampling for the 2023 Health Inspection for the. Samples were sent out and will take several weeks to receive all results.

Staff are preparing trucks and equipment for the upcoming Winter Stocking Program that will be stocked with two-year old Rainbow Trout on 11/20/23 and 11/21/23.

### **Pequest Maintenance**

After starting up the heat in all buildings now, we had to replace several circulator pumps and blower fans that had failed. We are still waiting for a few fans to be delivered. Core Mechanical came on 10/30/23 with the Trane Representative and looked over the new Chiller system and noted to Core Mechanical some additional work needed to be done before it could be started up. Not sure when it will start at this point as the work will need to be completed before Trane will come back out. The ball is back into Core Mechanical's court now and it could spring at this point as we explained that we will have to drain the heat exchanger system soon for winter.

We are in the process of having Strober Roofing fill out their DPA paperwork for the roof repairs needed on the maintenance garage roof after funding was secured through CBT funding. TGM Services provided estimates for lighting the front parking lot which was forwarded to Jessica Griglak in the Information Education department.

Sent two in-house tankers for repairs. One had a melted fuse box and the had a bad heater core.

### **CBT Paving Project**

DOT put up the signs around the education pond parking area on 11/23/23 which should be the last of this portion of this project.

### **Miscellaneous Activities**

The annual bioassay at the treatment plant was completed the week of October 24<sup>th</sup>, we are still awaiting results from Water Resource Management.

Worked on RFP for the domestic UV system as stated in permit and submitted it out for bidding, with bids due COB 11/10/23. The winning bid was from Portasoft of Morris County for \$84,518.38. We are in the process of obtaining a purchase order through CBT funding.

Wildlife Worker Scott Bentley's last day was 10/25/23 after resigning. We wish him well.

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## **HACKETTSTOWN STATE FISH HATCHERY** (Craig Lemon)

<b><u>Species</u></b>	<b><u># Fish</u></b>	<b><u>Avg.”</u></b>
Landlocked Salmon	3,200	5.5”
Muskellunge	3,750	9.5”
Largemouth Bass	2,000	6.2”
Largemouth Bass	2,000	4.4”
Hybrid Striped Bass	1,500	4.2”
Mosquitofish	50,000	1.0”

### **Stocking Totals** (October 16 – November 15)

<b><u>Date</u></b>	<b><u>Species</u></b>	<b><u>Location</u></b>	<b><u># Fish</u></b>	<b><u>Size (Inches)</u></b>	<b><u>Total Pounds</u></b>
10/24	Tm	Greenwood Lake	1,500	10.6”	300
10/24	Tm	Lake Hopatcong	1,915	10.6”	377
10/26	Tm	Cooper River Park	250	10.6”	50
10/26	Tm	DOD Lake	250	10.6”	50
10/17	Lmb	Roosevelt Park Pd	20	16.0”	40
	Hsb		25	18.0”	125
	Rbt		60	18.0”	180
10/17	Lmb	Rowands Pond	20	16.0”	40
	Hsb		25	18.0”	125
	Rbt		60	18.0”	180
10/18	Lmb	Hughes Lake	33	16.0”	66
	Rbt		80	18.0”	240
10/26	Lmb	DOD Lake	521	4.4”	32
10/20	Hsb	Lake Hopatcong	3,975	4.4”	169
10/23	Lls	Tilcon Lake	450	14.8”	600
10/23	Lls	Lake Aeroflex	505	14.8”	673
11/2	Lls	Wawayanda Lake	687	15.1”	1,021
11/3	Lls	Wawayanda Lake	598	15.1”	889
11/8	Lls	Merrill Creek Res.	688	15.1”	1,022
	Hsb – Hybrid Striped Bass	Lls- Landlocked Salmon	Lmb – Largemouth Bass		
	Rbt – Rainbow Trout	Tm- Tiger Muskellunge			

### **Intensive Culture**

#### **Landlocked Salmon**

Currently culturing 3,200 fish about 5.5” in two 2,000-gallon tanks. Staff are cleaning and feeding them daily.

#### **Muskellunge**

Currently culturing 3,750 9.5” fingerlings in two 2,000-gallon rectangular tanks.

Muskie culture has faced several issues this year. The PA Fish & Boat Commission was supposed to supply us with fingerlings in trade for Northern Pike, but they had hatchery issues and did not have enough fish. Biologists approved stocking Tiger Muskie fingerlings in place of

Muskies this year. 4,905 PA Fish & Boat Commission Tiger Muskies were stocked between 10/24 – 10/26 in place of Muskellunge. The PA tigers will be stocked the week of 10/16-10/20.

### Hybrid Striped Bass

Currently culturing 1,500 4.2” fingerlings in one 350-gallon circular tank. The 80°F recirculation system was shut down, so they are in 52°F spring water. Staff finished stocking the 2023 production fish on 10/20 in Lake Hopatcong. The hatchery pulled off a juggling act this year and managed to stock 46,470 fingerlings. The fish were from both Delmarva Aquatics and Keo Fish Farms.

### Mosquitofish

Staff harvested Pond 64 and brought in approximately 50,000 Gambusia to the Intensive Culture Building to hold over the winter. They are being grown in three 1,000-gallon tanks.

### Intensive Production Work

We are currently pumping 750 gpm of 52°F spring water. Staff shut down the 68 and 80°F recirculation systems for the winter.

### Extensive Culture

#### Largemouth Bass/Smallmouth Bass

The adult Largemouth and Smallmouth ponds have all been harvested and the broodfish were returned to their wintering ponds.

### Channel Catfish

All broodstock catfish are in pond 90. Pond 74 has 600 two-and-a-half-year-olds. Purchased 12,000 six-eight-inch yearlings from Arkansas.

### Hybrid Striped Bass

Staff moved 1,290 ten-inch Hybrid Stripers out of the Intensive Rearing Building on 4/5/23 to Pond 77. This is the first time we have overwintered these fish and they did very well. The goal is to get them to 16-inches (legal size) by the fall to use for a pilot stocking program. Staff have sampled pond 77 a couple of times and the fish ranged from 12-14 inches. It does not look like they will make the target size by fall and will be held over the winter for use in 2024.

### Information & Education

Provided information and photos for four GoFishFriday’s posts 127-130.

1,918 likes, 82 comments, and 66 shares. Answered as many questions as possible on these posts. The hatchery hosted one First Catch Center event. The event was targeted at introducing women to fishing. The event was well attended. I & E staff Linda, Karen, and Alanna handled the events and were excited with the interest and turnout. Trapper Education held their second class, and it was well attended with between 40-50 students. Hatchery staff attended a “Touch a Truck” event in Hunterdon County. The event was well Attended and many questions were asked and answered. Thanks for volunteering and helping Scott.

### Purchasing and Budget

Continue purchasing supplies for the 2023 season. Prepared two CBTM Projects-one for regrading pond 89 and the second for putting in a drainage ditch around the new garage. Both projects have been given the green light. Solicited phone quotes for plastic drainage pipe, stone, and equipment rental. Materials are arriving on site and the projects should begin soon. Struggling with business registration paperwork from vendors involved with the two CBTM projects. Working with Nancy Geiger and Kelly Oneill to obtain more Federal Aid money to help make it through the year.

### **Pond Harvesting**

Staff finished up the season draining the final six ponds. Ponds 27 and 41 were drained to gather fish for the fall urban fishing programs. Pond 15 was drained and the Smallmouth Bass broodfish were put back in pond 50 to overwinter. Staff spent the better part of two weeks harvesting ponds 85 and 5-acre bringing Fathead Minnows into the Intensive culture Building to use as forage for overwintering Muskellunge. The Spring Hole was drained, and the fish were moved into ponds 44 and 45 to use as forage for overwintering Muskellunge and Northern Pike.

### **Intensive Culture system Shutdown**

Both the 68 and 80°F recirculation systems were shut down for the winter. Boilers, pumps, UV filters, drum screen filters, and the biofilter were cleaned and shut off. Oxygen injection towers were turned off.

### **Winterize Vehicles, Equipment, and Buildings**

Over the past few weeks staff have been winterizing all trucks, boats and motors, mowers, tractors, heavy equipment, and buildings. Snowplows have all been hooked up and tested. Equipment has been shifted around to areas where it will stay for the winter. We are enjoying our new garage as we seem to have almost enough space now to get things indoors under roofs.