



BUREAU OF FRESHWATER FISHERIES MONTHLY REPORT



September 16, 2022 – October 15, 2023

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Craig Lemon, Superintendent
Edward Conley, Superintendent

Christopher Smith, Principal Fisheries Biologist
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Steve Jeffries, Repairer

Nancy Geiger, Agency Services Rep 3

Seasonals: Clint Decker, Luke Diglio, Thomas Goetschkes, Michael Kays, Kaitlin Kolakowski, Jared Koenigsberg, Mike Leshko, Karl Lightner, Yanni Paredes-Moreira, Jesse Tyther, Brooke Wakefoose, and Cheryl Weeks

FISHERIES MANAGEMENT

Fall Trout Stocking - Stocking for the Fall trout season began on October 10th and concluded on October 18th. Rainbow Trout raised at the Pequest Trout Hatchery were stocked in scheduled waters. The program consisted of a total of 20,670 two-year-old trout averaging 14.2 inches and 950 Broodstock trout averaging 19.2 inches. (Berezin)

Aquatic Invasive Species Management

Aquatic Invasive Species Management Plan Development – A draft Aquatic Invasive Species Management Plan is still being developed. The format of the plan is currently being reorganized per the recommendation of the USFWS. Participated in two meetings on 10/2/23 and 10/18/23 to discuss aspects of the plan. (Smith, F-48-R)

Water Monitoring Council Meeting – Presented at the Water Monitoring Council meeting on 10/4/23 that was held at the Central Region Office. The presentation consisted of an overview of invasive fish species in the state including distribution, abundance, and management activities. Attendees had a site visit to the Assunpink Lake boat where they collected Hydrilla and demonstrated the mobile boat cleaning station that has been utilized at Manasquan Reservoir and Spruce Run Reservoir. (Smith, F-48-R)

Warmwater Fisheries Management

Alloway Lake (Salem) – A boat electrofishing survey was completed during the day on 10/12/23 at Alloway Lake to assess the Largemouth Bass population. A total of 102 bass were collected during the 1.09-hour survey. Bass of all sizes were well represented with total of 86% (n=88) greater than 8", 38% (n=34) greater than 12" and 21% (n=19) greater than 15". The catch rate of 93 bass/hour, for all fish may have been slightly impacted as the lake had been lowered 2 feet for a dam repair. A follow up survey should be completed in the spring to monitor the population and validate the accuracy of the catch rates and size distribution. The lake received a supplemental stocking young of the year bass in 2012 and 2014. Given the amount of fishing pressure and current habitat conditions, another supplemental stocking should be completed in 2024. The lake is currently managed under Lunker Bass regulations. The forage base is excellent consisting of Gizzard Shad, Bluegill, and Golden Shiner. Yellow Perch and Black Crappie are also present and may serve as forage. Additional trees should be felled on any public property to improve habitat. No submerged vegetation was observed. Yellow water lily was present but sparse in a couple of shallow coves. (Smith F-48-R)

Merrill Creek Reservoir (Warren) – A boat electrofishing survey was completed on the night of 10/12/23 at Merrill Creek Reservoir to assess the Largemouth and Smallmouth Bass populations. The total survey time was 2.78 hours, with all habitat types well represented during the survey. The reservoir continues to be very challenging to effectively sample by boat electrofishing as the combination of clear water, depth, limited aquatic vegetation and generally unfavorable shoreline habitat conditions provide very little cover for bass. The preferred habitat is away from the shoreline in the standing timber that is much too deep to effectively electrofish and challenging to navigate. After experimenting with sampling in early spring and fall conditions, staff should continue to sample via boat electrofishing during the peak of bass spawning activity, which is generally during the first two weeks in May in this region. A follow

up electrofishing survey should be completed in the spring of 2024 to get a better understanding of the status of the bass population.

A total of 33 Largemouth Bass were collected during the survey, of which all were greater than the 200 mm (8") stock size. Larger adult fish were the most abundant with 60% greater than 12" and 50% greater than 15". The population structure and catch rates were consistent with previous surveys. Catch rates may in fact accurately reflect the low abundance of bass in the reservoir.

A total of 11 Smallmouth Bass were collected during the survey. The largest individual collected measured 17.2" (436 mm) and weighed 2.8 lbs (1.25 kg). A completed write-up of the spring and fall survey and recommendations will appear in the annual report. (Smith F-48-R)

Coolwater Fisheries Management

Spruce Run Reservoir Hybrid Striped Bass - As part of routine monitoring for the Coolwater Stocking Program, two 125' gill nets were set on Spruce Run Reservoir on October 2, 2023, to evaluate the population of Hybrid Striped Bass stocked to provide recreational angling opportunities. When the nets were pulled the following day, only a total of 5 Hybrid Striped Bass were captured, which was significantly lower than the 47 captured in the same locations in 2015. It was determined that surface water temperatures were significantly warmer (21.8°C vs 17.3°C) than in the previous survey due to a week-long period of unseasonably hot weather, likely affecting fish behavior. Sampling has been postponed until the week of 10/16/2023 to allow time for water temperatures to cool down. (Rozema, F-48-R)

TECHNICAL ASSISTANCE

New Jersey Statewide Dam Removal Partnership – Attended quarterly meeting on 9/20/23. This was the first meeting open to for profit entities and others. The role of the partnership was explained to new parties and watershed associations (Raritan Headwaters and Musconetcong Watershed Association) provided updates about ongoing removal projects. (Boehm)

“Expanding the Practice of Dam Removal” information session - Attended via Zoom on 10/3/23, session presented by American Rivers and TNC. (Boehm)

Freshwater Permits - Reviewed water lowering and fish stocking applications and contacted applicants as necessary to obtain required information. Responded to requests from the public for information on fish stocking and water lowering permit programs. (Staff)

WMA Fishing Tournament Permits – Fishing organizations continue to submit tournament reports for the 2023 season. With water temperatures cooling down and now hovering in the mid-60s, the fishing at Union Lake has been picking up. A recent tournament report two Largemouth Bass over six pounds that were weighed in. As the tournament fishing season ends the cooling water temperatures will continue to provide excellent bass fishing opportunities into early winter. (Smith)

INFORMATION AND EDUCATION

First Catch Center- Fishing for Catfish - Participated in a First Catch Center event on 9/22/2023 hosted at Hackettstown Hatchery by I&E staff. Presented statewide catfish ID, life history, and fishing tips related to finding catfish at any time of year to approximately 12 attendees. Also assisted with fishing education and teaching attendees about cleaning and filleting catfish. (Rozema)

Centennial Lake (Mercer) – Centennial Lake is a 2.75-acre impoundment of Shabakunk Creek, a tributary of Assunpink Creek, located in Lawrence Township, Mercer County. The impoundment is within Rider University. NJDEP Fish and Wildlife has performed an electrofishing survey and demonstration for an environmental science class annually since 2015. The demonstration is a good opportunity to expose students to NJ DEP careers and fisheries management. An electrofishing survey was completed on 10/10/23. A total of 60 Largemouth Bass were collected during the 0.45-hour survey. Though most of the bass were less than 15 inches, the population appears to be in better condition than previous years. We previously speculated that despite no reports of winter kill, the extremely shallow pond, which has an average depth of about 2.5 feet, is susceptible to winter or summer fish kills. The mild winters over the last two years may have contributed to the improvement in population abundance and condition. Large Bluegill and Pumpkinseed were collected and appeared to be rather abundant. The pond receives very little fishing pressure since it is located on the college campus and no fishing signs are present, however students do fish the pond. Other species observed include American Eel and Brown Bullhead. The pond appears stable, and no additional recommendations were provided to the professor and university. (Smith)

Fishing Regulations GIS Map Meeting - Participated in two meetings with BFF and OIS staff on 9/26/23 and 10/12/23 related to the development of the Fishing Regulations GIS Application. (Rozema, Crouse, and Boehm)

Northern Pike Article - Participated in a phone call conversation with Tom Pagliaroli on 10/5/23 in relation to an article he is writing about Northern Pike in New Jersey. (Rozema)

PEQUEST TROUT HATCHERY (Ed Conley)

<u>Stocking Program</u>	<u>Length</u>	<u>Average Daily Length Increase</u>	<u>Conversion</u>
Spring 2024 RBT (12 months old)	7.9"	0.018	1.80
Fall 2024 RBT (12 months old)	9.0"	0.015	3.19
Fall/Winter 2023 RBT (24 months old)	14.2"	0.018	0.67

Flow Rates – September 2023

7.66 inches of precipitation fell during the month of September.

Production well pumping rate average for September was 6,191 gpm with an average 9.17 million gallons per day pumped during the month.

The potable well pumped 7,762 gallons for the month of September.

Submitted quarterly water diversion reports on 10/2/2023.

Fish Culture Activities

The Fall Trout Stocking Program began on October 10th and concluded on October 18th. Rainbow Trout raised at the Pequest Trout Hatchery were stocked in scheduled waters. The program consisted of a total of 20,670 two-year-old trout averaging 14.2 inches and 950 Broodstock trout averaging 19.2 inches. The complete stocking summary for the Fall Trout Program will be in the next monthly report.



The hatchery staff have continued checking three-year-old broodstock weekly and have now finished spawning with a total of 7 takes amounting to 1.7 million eggs from 593 three-year old females. Eggs have been sterilized and placed in incubators. These eggs will be the production Trout for 2025. Lots 1-3 have hatched resulting in approximately 783,000 fry so far.

On 9/21/23 the rest of the Summer/Fall surplus Rainbow Trout (14,800 fish at 7.2 inches) went to the Hackettstown Hatchery for forage.

Joe Groff received results on the ovarian fluid samples taken for annual testing. The results were all good.

Staff cleaned E-line pools and set up broodstock for next year. They also began power washing B-line pools after they were emptied during Fall Stocking.

Pequest Maintenance

APS performed the Annual Fire Alarm Inspection of the facility on 9/27/23 and 9/28/23. Everything had passed. Also, the annual fire inspector visit was on 10/12/23 in which the facility passed. Sawyer Controls came out to fix the facility security cameras. We started heat up in the Administrative Building and had to replace a circulator pump. Core Mechanical is still waiting on a Trane representative for start-up and training on the new chiller in the administrative building. We have been calling weekly.

A couple of leaks have formed on the Maintenance garage roof. Strober Roofing gave us an estimate of \$4,800.00 estimate and we are awaiting two more estimates. TGM Services came out to look at the light poles in front parking lot. They tested some wires and will provide an estimate. Fixed lower raceway lighting after lighting failed. We had to pull some new wiring.

More big stocking trucks went to Cory Brothers for annual inspections and repairs in preparation of upcoming Fall Stocking. Staff also installed brakes on a pickup and installed a gasoline transfer tank for emergencies. A new block heater on main generator in Nursery building.

CBT Paving Project

DOT started and finished milling and paving around the Education Pond area.

Miscellaneous Activities

Did a Rack and Fin Radio interview with Tom Pagliaroli on 10/05/23 about trout production and the Fall Stocking Season.

Met with Cory Stevenson from Bureau of Water Systems and Engineering via Teams regarding the UV permit application submitted on 9/13/23. As per our concerns about installing a bypass line stated in the application, they agreed to install the bypass with the following restrictions. The bypass should not be a permanent connection. That is to say that the bypass line could be made, but one part of the piping or spool piece should be removed to create an air gap. If needed to be put into bypass, the temporary connection can be installed to complete the bypass piping, but then removed once no longer bypassing. The reason for this is to prevent any potential leaking through the valve and/or reduce the risk of being left in bypass mode. Also, "Do Not Drink" signs would need to be posted on all potentially potable taps and the Bureau of Safe Drinking Water alerted during the use of the bypass. Received completed permit on 10/19/23.

HACKETTSTOWN STATE FISH HATCHERY (Craig Lemon)

Intensive Culture (Inventory)

<u>Species</u>	<u># Fish</u>	<u>Avg."</u>
Landlocked Salmon	3,200	12.5"
Muskellunge	3,750	8.5"
Largemouth Bass	2,000	5.5"
Largemouth Bass	5,000	3.8"
Hybrid Striped Bass	8,000	3.8"

Stocking Totals (September 16 – October 15)

<u>Date</u>	<u>Species</u>	<u>Location</u>	<u># Fish</u>	<u>Size (Inches)</u>	<u>Total Pounds</u>
9/18	Tm	Monksville Res.	505	11.4	141
9/20	Tm	Lake Hopatcong	283	11.4	79
9/20	Lmb	Salem Canal	2,461	3.4"	68
9/29	Bs	Brainerds Lake	250	6.0"	42
9/19	Chc	Manasquan Res.	1,107	6.5"	79
10/2	Chc	Lake Ocquittunk	155	12"	79
10/2	Chc	Jefferson Lake	135	12"	63
10/2	Chc	Verona Park Pond	200	12"	83
10/2	Chc	Branch Brook Pk Pd	200	12"	106
10/2	Chc	Mount Hope Pond	210	12"	92
10/2	Chc	Lake Ames	195	12"	87
10/2	Chc	Hedden Park Pond	135	12"	66
10/2	Chc	Speedwell Lake	200	12"	77
10/2	Chc	Burnham Park Pd	50	12"	26
10/2	Chc	Amwell Lake	180	12"	80
10/2	Chc	Rosedale Lake	220	12"	94
10/2	Chc	Groppe Lake	200	12"	89
10/2	Chc	Peddie Lake	210	12"	90
10/2	Chc	N. Community Pk	50	12"	19
10/3	Chc	Echo Lake	165	12"	71
10/3	Chc	Lake Carasaljo	220	12"	95
10/3	Chc	Lake Manetta	210	12"	90
10/3	Chc	Lake Shenandoah	240	12"	97
10/3	Chc	Spring Lake	190	12"	75
10/3	Chc	Lake Como	220	12"	85
10/3	Chc	Deal Lake	220	12"	95
10/3	Chc	Sylvan Lake	50	12"	17
10/3	Chc	Woolmans Pond	125	12"	60
10/3	Chc	Laurel Acres Pond	65	12"	27
10/3	Chc	Haddon Lake	175	12"	73
10/3	Chc	Greenwich Lake	210	12"	78
10/3	Chc	Swedesboro Lake	200	12"	98
10/3	Chc	Green Turtle Pond	200	12"	73
10/3	Chc	Cantys Pond	125	12"	52

10/3	Chc	Furnace Lake	150	12"	50
10/4	Chc	Scarlet Oak Pond	200	12"	80
10/4	Chc	Liberty Park Pond	40	12"	16
10/4	Chc	Whites Pond	135	12"	54
10/10	Chc	Woodstown Mem. Pd	200	12"	101
10/10	Chc	Mary Elmer Pk Pd	145	12"	80
10/10	Chc	Giampetro Pk Pd	180	12"	86
10/10	Chc	Oak Pond	100	12"	49
10/10	Chc	Penbryn Lake	200	12"	108
10/10	Chc	Black Brook Pk Pd	50	12"	27
10/10	Chc	Lower Echo Pk Pd	135	12"	85
10/10	Chc	Nomehegan Park Pd	145	12"	75
10/10	Chc	Warinanco Park Pond	155	12"	85
10/10	Chc	Franklin Lakes Nature	200	12"	96
10/10	Chc	Oldham Pond	200	12"	105
10/11	Chc	Milton Lake	175	12"	85
10/11	Chc	Roosevelt Park Pd	150	12"	73
10/11	Chc	Lake Papianni	150	12"	73
10/11	Chc	East Brunswick Pk Pd	200	12"	106
10/11	Chc	DeVoe Lake	100	12"	56
10/12	Chc	Lake Topenemus	220	12"	110
10/12	Chc	Turkey Swamp Park	200	12"	100
10/12	Chc	Kesslars Pond	75	12"	38
10/12	Chc	Heritage Park Pond	125	12"	63
10/12	Chc	Birch Grove Park Pds	200	12"	100
10/12	Chc	Ponderlodge Pond	150	12"	75
10/12	Chc	Grover Cleveland Pk	25	12"	13
10/12	Chc	Crystal Lake	135	12"	68
10/12	Chc	Orange Park Pond	60	12"	30
10/12	Chc	Irvington Park Pond	70	12"	35
10/12	Chc	Weequahic Park pd	250	12"	125
10/12	Chc	Stone Tavern Lake	250	12"	125
10/12	Chc	Turnmill Pond	250	12"	125
10/13	Chc	Mannys Pond	100	12"	50
10/13	Chc	Barbours Pond	160	12"	80
10/13	Chc	Otto Pehle Pk Pd	165	12"	83
10/13	Chc	Dahnerts Pond	75	12"	38
10/13	Chc	Indian Lake	50	12"	25
9/19	Hsb	Manasquan Reservoir	7,355	4.0"	230
9/20	Hsb	Lake Hopatcong	8,408	4.0"	248
10/5	Hsb	Spruce Run Res	12,903	4.1"	428
10/6	Hsb	Lake Hopatcong	13,829	4.1"	449

Bs – Bluegill Sunfish

Chc – Channel Catfish

Hsb – Hybrid Striped Bass

Lmb – Largemouth Bass

Tm-Tiger Muskellunge

Intensive Culture

Landlocked Salmon

Currently culturing 3,200 fish about 12.5 inches in three 2,000-gallon tanks. Staff are cleaning and feeding them daily. Massachusetts dropped off 3,200 five-inch fish on September 19th in trade for 2,000 Northern Pike fingerlings. Staff will be stocking last year's salmon the week of 10/23-10/27.

Muskellunge

Currently culturing 3,750 8.5" inch 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. Fisheries Biologists approved stocking Tiger Muskie fingerlings in place of pure-strain Muskies this year. The P. tigers will be stocked the week of 10/16-10/20.

Hybrid Striped Bass

Delmarva Aquatics delivered 25,000 three-inch Hybrid Striped Bass fingerlings. They were grown for three weeks in two 2,000-gallon rectangular tanks and six 350-gallon round tanks. Staff float stocked these fish 10/5 and 10/6 once they reached the target size of four inches. Currently culturing another 8,000 in three round tanks that are scheduled to be stocked in Lake Hopatcong on Friday, October 20.

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 553 gpm of 52°F spring water, 205 gpm of 68°F recirculation water, and 307 gpm of 80°F recirculation water.

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. The fish were split into ponds 16 and 78. They looked good going in and have been feeding very well on the surface. They are being fed twice daily. Staff sampled them on 9/4 and they averaged eleven inches. Staff harvested both ponds and the fish have been stocked in 68 waters.

Pond 16 – 5,045 fish – 2,573 pounds

Pond 78 – 5,485 fish – 2,336 pounds

10,530 fish – 4,909 pounds

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 123-126. 1,037 likes, 14 comments, and 37 shares. Answered as many questions as possible on these posts. The hatchery hosted two First Catch Center events. The first one was "Learning how to fish for Catfish" and the second was "Family Fishing". Both events were well attended. I & E staffers Linda, Karen, and Alanna handled the events and were happy with both events. Trapper Education held their first class, and it was well attended with between 40-50 students. The second class is scheduled for October 21 and 22.

Purchasing and Budget

Continue purchasing supplies for the 2023 season including fish, and fish feed. Prepared two CBTM Projects-one for regrading Pond 89 and the second for putting in a drainage ditch around the new garage. Both project 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 O'Neill to obtain more Federal Aid money to help make it through the year.

Mosquitofish Distribution

The 2023 Mosquitofish season has come to a close as temperatures have dropped into the 30°F's and 40°F's. The hatchery provided over 207,000 Fathead Minnows and 35,000 Mosquitofish to the 11 NJ Counties that requested them. The season started off dry but turned very wet. Minnow supplies from Arkansas were difficult to come by early in the season.