

# FY 2022 Annual Report

July 1, 2021 – June 30, 2022



State of New Jersey  
Department of Environmental Protection  
Fish and Wildlife

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Department of Environmental Protection  
Fish and Wildlife  
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## **New Jersey Fish and Wildlife**

New Jersey Fish and Wildlife (NJFW) is a professional, environmental, and scientific organization dedicated to the protection, management and wise use of the state's fish and wildlife resources. It is responsible for the oversight of more than 358,000 acres in the Wildlife Management Area System and is the lead agency managing all wildlife species in New Jersey. This includes game animals, freshwater and marine fish, shellfish, birds, amphibians, reptiles, and endangered and nongame species. Fish and Wildlife staff also educate the public about wildlife-related issues, and conservation police officers enforce the laws that protect wildlife.

This report contains the many accomplishments of an experienced and dedicated staff. These accomplishments are often made possible through cooperative efforts of our federal, state, and non-government agency partners, and are primarily funded by the license fees of hunters, anglers and commercial fin and shell fishermen as well as the federal grants derived from excise taxes on their equipment and marine fuel. NJFW also relies on a portion of the State General Appropriation to support marine fisheries and endangered species conservation as well as the many associated services provided to the public.

### **Our Mission**

Protect and manage the state's fish and wildlife to maximize their long-term biological, recreational, and economic value for all New Jerseyans.

### **Our Goals**

- ❖ To maintain New Jersey's rich variety of fish and wildlife species at stable, healthy levels, and to protect and enhance the many habitats on which they depend.
- ❖ To educate New Jerseyans on the values and needs of our fish and wildlife, and to foster a positive human/wildlife co-existence.
- ❖ To maximize the recreational use and economic potential of New Jersey's fish and wildlife for both present and future generations.

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## **Bureau of Freshwater Fisheries**

### **Shawn Crouse, Chief**

The Bureau of Freshwater Fisheries is responsible for the propagation, protection and management of the state's freshwater fisheries resources as well as promoting their recreational use. In addition to raising and distributing several million fish annually, the Bureau conducts research and management surveys, classifies the state's waterways, provides technical input on a variety of watershed and habitat-based issues, facilitates habitat restoration projects, serves as a liaison to a variety of conservation groups, and provides information to the public in a variety of forums concerning the management of New Jersey's freshwater fisheries. The Bureau also administers more than 600 permits annually to effectively manage and protect these important aquatic resources.

### **Highlights**

#### **Trout Stocking**

The 2022 Spring Trout Stocking Program took a major step forward by returning to a 10-week stocking program (three weeks preseason; seven weeks in-season) under normal regulations, including pre- and in-season waterbody closures. With these adjustments, the program is similar to the pre-pandemic program.

A total of 591,510 rainbow trout were distributed during the spring program (583,990 production-size trout along with 7,520 broodstock). Even though this year's spring program is comparable to pre-pandemic stocking efforts, there is one exception. A total of 70,000 trout were redistributed from the in-season program and were released during the three weeks of preseason stocking. This was a temporary adjustment put in place to reduce production and stocking concerns should the pandemic significantly interrupt operations again.



*Rainbow trout broodstock averaging 19.4 inches were stocked for anglers to enjoy.*

During the 2021 Fall Trout Stocking Program (October 12 – 20), a total of 20,360 two-year-old production trout were stocked along with 885 larger three-year-old broodstock. During the 2021 Winter Stocking Program (November 22 – 23), 4,680 two-year-old rainbow trout averaging 14.7 inches and 1.6 pounds each were released into 19 waterbodies.



*A net full of four-inch walleye fingerlings were stocked, courtesy of the Pennsylvania Fish and Boat Commission.*

## Cool and Warmwater Stocking

The Hackettstown State Fish Hatchery raised and distributed over 3.2 million fish representing 12 different cool and warmwater species. Highlights include stocking 1,000 channel catfish in 25 waters. The fish averaged 18 inches in length and weighed 1.4 pounds each.

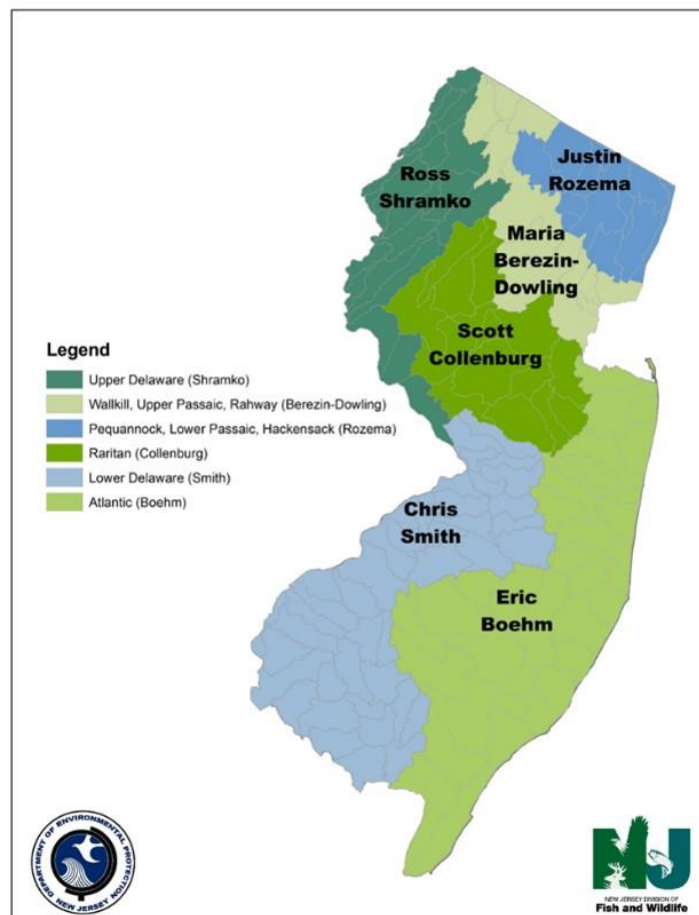
Throughout the pandemic, trading fish between states has played an important role. Because staff did not collect adult muskellunge or walleye in the spring, fisheries biologists relied solely on eggs and fish supplied by the Pennsylvania Fish and Boat Commission. In return, New Jersey supplied its sister agency with surplus channel catfish eggs and northern pike.

## Research and Management Unit

During FY22, significant strides were made to restaff and reorganize the Bureau's Research and Management Unit. In recent years, many of the Bureau's professional staff members were lost to retirement, and this coupled with the pandemic, significantly reduced the amount of field research that could be undertaken. During this time, biologists' positions were backfilled with a realignment of staff responsibilities. The unit currently consists of six regional fisheries biologists (each with specific areas of expertise), one technician, and one wildlife worker. With the welcome loosening of social distancing restrictions, the 2022 field season was able to get underway in June.

## New State Record Landlocked Salmon

NJFW's Landlocked Salmon Program continues to expand. Each autumn when surface water temperatures fall



*Six Freshwater Fisheries Management Regions broken down by watershed.*



below 60°F (October-early November), approximately 2,500 – 3,000 salmon, averaging 14-15 inches in length are stocked in New Jersey.

When NJFW added Merrill Creek Reservoir to the stocking list in 2018, the salmon population adjusted so well that the location is now an excellent place to try fishing for this popular species. In fact, the existing landlocked salmon record was broken here on September 30, 2021, with an 8-pound, 10 ounce specimen that eclipsed the previous record by 5 ounces. The fish measured 26 inches in length with a 16 ¼-inch girth.



*New state record landlocked salmon weighing in at over eight pounds.*

Merrill Creek is an exceptionally deep (210 feet), 650-acre waterbody containing a salmon population that complements the reservoir's existing rainbow and lake trout fisheries. Lakes Wawayanda and Aeroflex as well as Tilcon Lake are also stocked, and like Merrill Creek, have cold, well-oxygenated water with alewife forage bases that support coldwater species like trout and salmon year-round.

## **Bureau of Land Management**

### **Jason Hearon, Chief**

The Bureau of Land Management is responsible for administering NJFW's Wildlife Management Area (WMA) System that encompasses more than 358,000 acres on 122 separate areas. These areas are managed for a diversity of fish and wildlife species through a variety of habitat improvement projects. Public access for wildlife-associated recreation is encouraged through the development of visitor facilities, maintenance of roads and bridges, and the construction of parking areas and boat ramps. The Bureau is also responsible for the maintenance of NJFW office buildings, shooting ranges, dams, and water control structures, and offers technical assistance to DEP's Green Acres Program in the acquisition of open space and critical habitat.

The importance of outdoor recreation was never more apparent than during the worldwide pandemic. While most Division staff had the ability to work from home, Bureau of Land Management (BLM) employees were essential to maintaining the grounds and facilities for the public. Wildlife habitat projects, and the stocking of trout (570,000+) and game birds (72,000+) were never compromised. All of the challenges, however, had a positive impact when NJFW's WMA System was discovered by thousands of new visitors who took advantage of it when the State Park System was temporarily closed to the public. Although the influx of new users posed challenges to an already understaffed crew, the agency was able to successfully continue operations and provide a welcome respite for these visitors.

## **Highlights**

### **Sheppards Mill Pond Improvement Project**

In FY22, staff completed a major boating access project within the Cohansey River Wildlife Management Area in Cumberland County. The project enhanced access to Sheppards Mill Pond and included improvements to the entrance, roadway, and boat ramp as well as an expanded parking area and the installation of a floating dock.



*New and improved access to Sheppards Mill Pond at the Cohansey River WMA.*

Previously, the entranceway to the pond was unusually narrow and the steel fence posts on each side made it extremely difficult for vehicles with boat trailers to maneuver. By removing the posts and creating an apron, the entrance was widened. In addition, the access road was mowed to remove overhanging branches and vines, and densely graded crushed rock was spread out to provide a smooth, solid driving surface.

The existing parking area was enlarged to accommodate trucks with trailers and several trees hampering the launch site were removed. Stone was also spread around the ramp to increase traction and reduce the possibility of vehicles getting stuck in the sugar sand leading in up to the ramp.



*View of the enlarged parking area.*



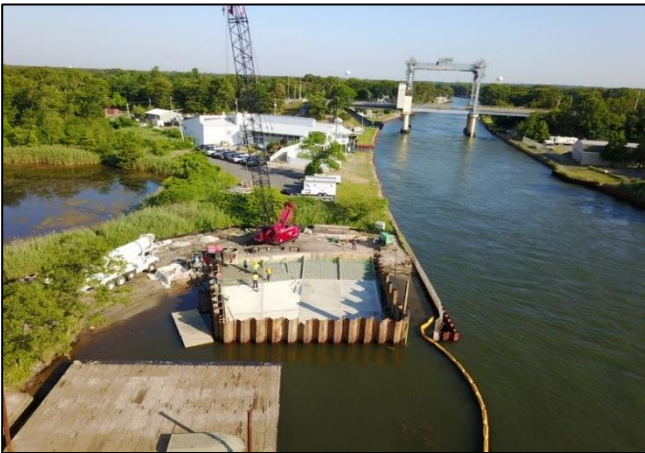
Finally, an L-shaped dock with cleats was installed to allow boaters an opportunity to tie-up after launching or preparing to pull their boat from the pond. The dock also provides a stable surface for boaters to load/unload their gear and enter/exit their vessels.

*Boaters now have an L-shaped dock to make launching or pulling much easier.*



### **Point Pleasant Fishing Access & Boat Ramp Site Renovation**

In June of FY22, a major renovation project was undertaken at the Point Pleasant Fishing Access and Boat Ramp Site in Ocean County. Slated for completion in mid-November, improvements will include the replacement of fencing along the canal, a new concrete boat ramp, improved parking area for easier accessibility, and two new docks. Once completed, a living shoreline utilizing native plantings will be created. NJFW is committed to increasing and improving boating and fishing access throughout the state. A similar project is in the works at the Tuckahoe WMA in Atlantic and Cape May counties. The Bureau is also considering a project like this at the Belvidere Fishing Access and Boat Ramp Site in Warren County.



*The concrete ramp under construction (aerial view).*



*Ramp construction site (ground level).*

## Bureau of Law Enforcement

### Frank T. Panico, Chief

The Bureau of Law Enforcement was created in 1871 and is one of the oldest law enforcement agencies in New Jersey. The Bureau's conservation police officers (CPOs) are the most visible faces of NJFW and are responsible for enforcing regulations that protect wildlife species and their habitats. Traditionally, the Bureau concentrated on the enforcement of hunting, fishing, and trapping as well as commercial and recreational marine resource regulations. However, each year the Bureau's activities grow in number and scope. Today's conservation police officers are active in every area of fish, wildlife, and natural resource protection.

CPOs patrol NJFW's Wildlife Management Area System, encompassing 350,000+ acres. These patrols are not only directed at traditional hunting and fishing enforcement, but also address illegal off-road vehicle use, dumping, and pollution violations affecting public health and safety. CPOs enforce bans on the harvest of crabs from polluted waters, and enforce aquaculture, clamming and oystering regulations. Officers also assist with efforts to control nuisance bears and mitigate bear-human interactions. They are also the point of contact for issuing depredation permits for the state's farmers experiencing crop loss due to deer damage.

Conservation police officers are spending an increasing number of hours conducting public outreach. Educating hunters, anglers, and the public about the environment and the importance of natural resource conservation is a rewarding and important responsibility assigned to the modern CPO. Officers are now present at all hunter education classes to assist with training the next generation of hunters. They are also active with local law enforcement efforts to promote relationships with the communities they serve by attending *National Night Out* and *Junior Police Academy* events. Most recently, CPOs hosted three day-long camps as part of the DEP's Youth Diversity and Inclusion Initiative.

### Highlights

#### 2022 Award of Excellence

The Bureau was honored to receive the *2022 Award of Excellence* from the Atlantic States Marine Fisheries Commission for its contribution to Atlantic coastal fisheries conservation, particularly the enforcement of striped bass regulations in state waters. Conservation police officers from



*Award given to the NJ Bureau of Law Enforcement.*

each of the Bureau's four regions (north, central, south, and marine) participated in targeted patrols that included many late and overnight hours. Once tallied, the results revealed that the officers had amassed 650 patrol hours and had conducted over 4,000 inspections within Raritan Bay, Newark Bay, Arthur Kill, and the Hudson River. The entire operation resulted in more than 300 summonses issued for violations, including the possession of undersized fish, over the limit catches, and fishing during the closed season.

### **CPO Recruit Title Classification Change**

A title classification change was recently completed for the Conservation Police Officer Recruit position. This change eliminates the entry exam that CPO recruits were previously required to take, allowing for a more diverse and inclusive pool of candidates to choose from and eventually hire. A team that included Bureau staff, NJFW Assistant Commissioner D. Golden, and representatives from both the DEP Division of Human Resources and New Jersey Civil Service Commission began the title revision in August 2021 and since its completion, the Bureau has hired six new CPO Recruits who will begin training at the Cape May County Police Academy and hopefully graduate in January of 2023.



*Some of the under-sized striped bass seized during the operation.*

### **Marine Resources Administration** **Joseph Cimino, Administrator**

The Marine Resources Administration includes the Bureaus of Marine Fisheries and Shellfisheries. It supervises and coordinates the planning, organization, operation and management of the marine and estuarine finfish and shellfish resources of New Jersey, worth an estimated \$2 billion. The Marine Resources Administration also coordinates New Jersey's fishery management activities on a coastwide basis with the Atlantic States Marine Fisheries Commission and the Mid-Atlantic Fishery Management Council.



## **Highlights**

### **Offshore Wind Research and Monitoring**



Staff have been actively supporting the New Jersey Offshore Wind Research and Monitoring Initiative, a joint effort between the Department of Environmental Protection and the Board of Public Utilities. Through their partnership and collective expertise, these environmental professionals are committed to identifying, developing, and funding the critical research needed to harness the energy provided by offshore wind. Initial funding for the RMI was provided by New Jersey's second Offshore Wind

Solicitation, which required potential developers to financially contribute to regional research efforts.

Though officially established in December 2021, identification of research priorities had actually begun in 2018 when the DEP's Marine Resources Administration formed an internal working group to evaluate the potential risks of offshore wind on marine resources. Since that time, research priorities have become a multi-step process of identifying marine resources in wind energy areas, researching potential effects and impacts to determine which species are most vulnerable, and understanding where significant information gaps exist. Over time, this has evolved to include a rigorous collaboration with state and federal agencies, regional offshore wind groups, New Jersey Marine Fisheries Councils, academia, and the New Jersey Environmental Resources Working Group. As a result, the list of research priorities is an extensive one that has undergone careful peer review and gained regional support.

Ultimately, the goal of the Research and Monitoring Initiative is to ensure that as the Garden State moves toward a clean energy economy, our coastal and marine resources continue to be protected and responsibly managed.

## **BUREAU OF MARINE FISHERIES**

### **Jeffrey Brust, Chief**

The Bureau of Marine Fisheries is responsible for developing and implementing management programs to protect, conserve, and enhance New Jersey's marine fisheries resources. To formulate sound state management plans, the Bureau conducts studies to gather information about New Jersey's marine species as well as the user groups that rely upon them. This research is then combined with information from other Atlantic states and federal management agencies to support coastwide management plans.

Since many marine fisheries species are migratory in nature, they are managed on a coastwide basis by the Atlantic States Marine Fisheries Commission and/or the Mid-Atlantic Fishery

Management Council. The Bureau of Marine Fisheries plays a vital role in representing New Jersey's fisheries and fishermen, both commercial and recreational, through these organizations.

Federal legislation mandates that states implement every fishery management plan approved by the Atlantic States Marine Fisheries Commission. Each plan requires that states employ the required management measures, enforce those rules, and monitor the status of the fishery population. States failing to comply with the requirements of the plan risk a federally imposed moratorium in their state for those species covered.

## **Highlights**

### **Artificial Reef Outreach**

Between May and June of 2022, Bureau staff, with the help of more than 200 seventh grade students from the Robert R. Lazar Middle School in Montville (Morris County), built 12 concrete reef ball structures as part of a school grant. Students learned how to build the 4-foot high by 4-foot diameter concrete structures that once deployed, will provide homes to hundreds of marine animals and plants on the ocean floor. The reef balls were deployed on the Manasquan Inlet Reef on June 7 with help from the New Jersey Department of Aids to Navigation and will provide recreational divers and fishermen an opportunity to catch lobsters, black sea bass, tautog, summer flounder and many other saltwater species.



*Students view the results of their hard work.*

The New Jersey Artificial Reef Program has been building hard substrate habitats for marine life off the coast of New Jersey since 1984 (many of which are concrete reef balls). Together these structures comprise over 4,300 deployments within a network of 17 permitted reef sites. While reef program staffing and operational costs are funded by federal Sportfish Restoration Program funds, material acquisition and deployment are often purchased with donations from private fishing clubs and non-profit organizations.

### **Commercial Crab Pot License/Delaware Bay Dredge License Transfers**

In January 2022, limited opportunities to transfer Commercial Crab Pot or Delaware Bay Dredge licenses to an individual other than an immediate family member became available to current license holders when new transfer rules were adopted in December 2021. The number of allowable transfers was limited to prevent potential overharvesting of the crab resource, which is possible if every license holder fully utilized his/her license to harvest crabs. Between January 1





*There are new transfer rules for Commercial Crab Pot and Delaware Bay Crab Dredge license holders.*

and February 28, the Marine Resources Administration (MFA) accepted applications from Commercial Crab Pot and Delaware Bay Crab Dredge license holders who wished to be considered for the new transfer provisions. As part of the new rules, the MFA is required to institute a *License Transfer Lottery* and process applications each year include up to 20 Active Commercial Crab Pot License transfers, 5 Inactive Crab Pot License transfers, and 5 Delaware Bay Crab Dredge License transfers.

In FY22, the MFA received 29 transfer applications (3 Active Crab Pot, 18 Inactive Crab Pot, and 8 Delaware Bay Crab Dredge). The three active Crab Pot License applications were immediately processed since the maximum number of applicants in that category had not been reached (20), and a lottery was held to select the five allowable candidates in the other two license categories. Winners were selected at random and notified by mail. Unsuccessful applicants were informed that they would have other opportunities to transfer their licenses in subsequent years.

None of the changes affect the transfer of licenses to immediate family members. The existing rules remain the same and allow holders to transfer their licenses to immediate family members at any time upon submitting an application.

### **Raritan Bay Survey**



*Staff conduct a multi-gear inventory project in the Raritan Bay-Sandy Hook Bay Complex.*

In March 2022, staff initiated a multi-year, multi-gear inventory project in the Raritan Bay-Sandy Hook Bay Complex. The study will document one of New Jersey's major estuaries by estimating the abundance of finfish and invertebrates in the area, detecting population changes within the complex, and characterizing the estuarine communities present to include species composition, size, age, and dietary preferences.

Sampling with three different gears (otter trawl, gill net and beach seine) is conducted monthly throughout the survey area, which stretches from the Sandy Hook Peninsula to the mouth of

the Raritan River. To date, staff completed 80 otter trawl tows, 74 seine hauls, and 59 gill net sets at random locations each month. The majority of catches for all gear types were Atlantic

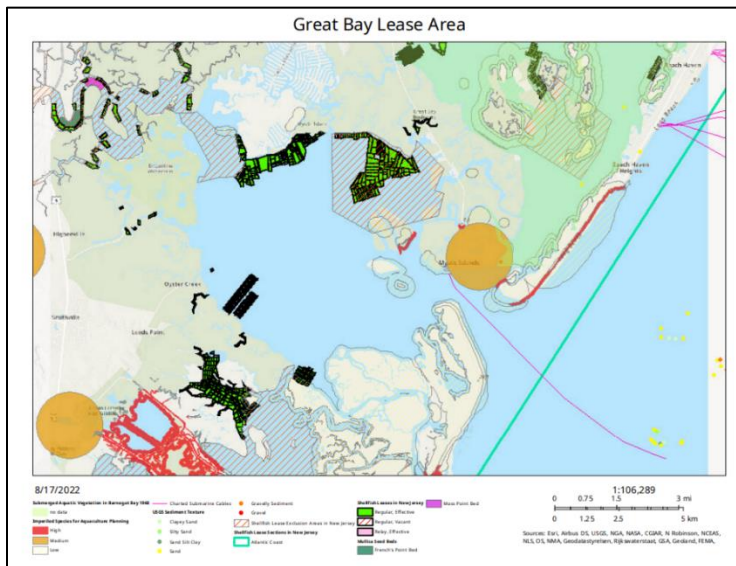
menhaden, Atlantic silversides, bay anchovies and killifish (both mummichogs and striped). Bluefish, fluke, winter flounder, black sea bass, butterfish, scup, and a variety of different crab species were also caught. This is the first dedicated survey in Raritan Bay since the 1980s. Data from this research will be used to make state and regional management decisions for many of New Jersey's commercially and recreationally important species.

**BUREAU OF SHELLFISHERIES**

## Russ Babb, Chief

The Bureau of Shellfisheries (BSF) directs shellfish harvest and propagation programs along the Atlantic Coast and in Delaware Bay. Biologists work with other NJFW bureaus as well as various state and federal agencies on marine habitat conservation and shellfisheries management activities. Staff members also work closely with the New Jersey Shellfisheries councils (Atlantic Coast and Delaware Bay) on these issues. In addition, the Bureau is committed to fostering aquaculture development and reviewing coastal development activities to protect critical habitat. Staff members manage surf clams in the Atlantic Ocean and oysters in Delaware Bay as well as examine the impacts of offshore sand mining. In addition, they are responsible for administering a licensing program for recreational and commercial shellfishermen as well as the state's Shellfish Aquaculture Program.

## Highlights



*GIS-generated map of the Great Bay Shellfish Aquaculture Lease Area.*

# GIS Tool for Planning and Managing Aquaculture Leases

BSF staff partnered with a team of Rutgers University researchers in developing a geospatial tool to analyze data about conditions affecting shellfish aquaculture production and shellfish lease location. Staff from NJFW's Endangered and Nongame Species Program and Office of Fish and Wildlife Information Systems were also involved in helping to develop the GIS map layers needed for the project. This new interactive tool identifies suitable areas for shellfish aquaculture and determines optimal

locations for leases in New Jersey's coastal bays. It is intended for use as an additional resource when planning and developing policy-making decisions regarding public use of the state's coastal resources and can help officials recognize potential issues before leases are established. While this technology can be used by state and federal agencies as well as the

stakeholder community for aquaculture purposes, the tool could have broader applications for coastal managers, planners, and policy makers in the future.

### **New Commercial Shellfish Aquaculture Website**

Staff led a multi-agency effort to develop a website specifically for commercial shellfish aquaculture in New Jersey. The DEP-hosted site offers a single source setting for state and federal agencies to easily access information such as leasing, licensing, and permitting as well as safe harvesting/handling practices, current news, and details on upcoming meetings in one convenient location.

The project is the result of cooperation between staff across DEP: NJFW's Bureaus of Shellfisheries and Law Enforcement, DEP's Office of Information Technology, Division of Land Resource Protection's Bureau of Tidelands Management, Coastal and Land Use Compliance and Enforcement, and Division of Water Monitoring and Standards' Bureau of Marine Water Monitoring. Staff from the NJ Department of Agriculture, the NJ Department of Health's Public Health and Food Protection Program, the U.S. Food and Drug Administration and U.S. Army Corps of Engineers also contributed to creating the site.

### **Shell Recycling Program**



Bureau staff continued to develop NJFW's *Shell Recycling Program* (SRP) in partnership with Rutgers University, Stockton University, and the Jetty Rock Foundation. This unique program collects discarded shell from one casino and three local restaurants in the greater Atlantic City area to foster oyster reefs along the Mullica River (one of the last self-sustaining oyster reefs on the Atlantic Coast). The salvaged shell (known

as cultch) is placed upon the riverbed to provide vital attachment surfaces for oyster larvae to cling to and grow. Prior to this program, clam and oyster shell from these establishments were considered refuse and sent to area landfills. However, with the creation of the SRP, otherwise wasted shell is now repurposed.

Bureau staff continue to seek grant opportunities that would allow the program to expand by adding participating businesses, establishing public drop off sites and increasing outreach/educational opportunities. To date, the program has recycled and planted nearly 200 tons of shell on the area's oyster reefs.

### **Bureau of Wildlife Management**

#### **Carole Stanko, Chief**

The Bureau of Wildlife Management provides the scientific information and recommendations necessary to develop conservation plans for New Jersey's game species. It also assists with NJFWs pheasant and quail stocking operations and advises the public on ways to reduce damage

caused by wildlife. Biologists work with other agencies and local governments to develop cooperative management programs throughout the state. These professionals also monitor wildlife population numbers and health conditions. The information collected is of critical importance to the Fish and Game Council which relies on it to determine New Jersey's annual hunting and trapping regulations.

## **Highlights**

### **Increased Staffing Capacity**

Governor Murphy granted a \$1.5 million appropriation to NJFW for black bear research and wildlife control/response efforts. As a result, the Bureau was able to increase staffing by adding six employees to assist with this work. The funding has also allowed the Bureaus of Law Enforcement and Wildlife Education to make valuable staff additions to focus on black bear outreach/education, and enforcement activities.

In addition, a separate appropriation supported by the New Jersey Farm Bureau has enabled the Bureau to hire an additional wildlife biologist trainee for the White-tailed Deer Research Project. This individual will be dedicated solely to public outreach.

### **Tuckahoe WMA Managed Waterfowl Hunt**

Photo: USFWS



*Canada geese prepare for a landing.*

More than ten years ago, Fish and Wildlife partnered with Ducks Unlimited and the Cape May County Department of Mosquito Control to procure a \$1 million habitat restoration grant to repair the aging impoundments at the Tuckahoe Wildlife Management Area. The project was paid using federal funding through the North American Waterfowl Conservation Act. Restoring the 70-year-old impoundments and surrounding wetlands have given Fish and Wildlife a unique opportunity to

manage the area for healthy waterfowl populations while also providing a quality hunting experience for both novice and seasoned sportsmen and women alike.

### **New Multi-Zone Deer Permit**

Deer Season Regulation Sets are groups of deer management zones with the same season dates and bag limits. To hunt a zone during a permit season (bow, shotgun, or muzzleloader), a hunter has to purchase a zone-specific permit (\$28) for *each* zone they wish to hunt during *each* permit season. In zones with high deer densities, specifically Regulation Sets 7 and 8, a Multi-Zone Permit was introduced to encourage hunters to harvest deer in areas where it's most needed and for a significant cost savings. In other words, for the price of two traditional permits (\$56), a



hunter can now hunt within all six zones in Regulation Set 7 (7-9, 12, 17 and 41) or within all nine zones in Regulation Set 8 (10-11, 13-15, 36 and 49-51) for the chosen permit season. Of course, even with the addition of this new Multi-Zone Permit, hunters can still opt to purchase single zone permits as they have done in the past.

## **Endangered and Nongame Species Program**

**John Heilferty, Chief**

The Endangered and Nongame Species Program (ENSP) was created in response to the New Jersey Endangered Species Act of 1973. Since more than 80 endangered and threatened species inhabit the Garden State, the ENSP is committed to conserving this biological diversity by working to maintain and foster endangered and threatened populations as well as protect the unique habitats on which they depend. The program is also responsible for administering the State Income Tax Check-Off for Wildlife which benefits this important work.

### **Highlights**

#### **Horseshoe Island**

Horseshoe Island is a roughly 100-acre landmass that formed east of Little Egg Inlet during the spring of 2018. The island is the result of southward-shifting sand from beach fills conducted on Long Beach Island over the years since Superstorm Sandy.

By 2020, the island appeared to have gained enough elevation to potentially support beach-nesting birds. However, due to the pandemic, it was not until 2021 that biologists were able to confirm that migratory shorebirds and seabirds were using the area for nesting. Since that time, hundreds of endangered, threatened, and species of special conservation concern have been documented utilizing the island – including the federally-listed Piping Plover, Red Knot, and Roseate Tern as well as the state-listed Black Skimmer and Least Tern. A colony of Royal Terns was also present, representing the northernmost nesting site of this species in the Western Hemisphere.

This site is uniquely placed along the Atlantic Coast and its value to wildlife is unprecedented in New Jersey's coastal landscape. Concerns about human disturbance led NJFW and Edwin B. Forsythe National Wildlife Refuge to petition the New Jersey Tidelands Resource Council for management rights that were granted in early 2022.

Currently, the island continues to provide critical habitat for some of our most imperiled species. It is not uncommon to see hundreds of Black Skimmers, Least Terns, Royal Terns, Common Terns, and American Oystercatchers nesting there along with various shorebirds that utilize the area as a critical stopover point along their northern and southern migratory journeys.



## American Kestrel

American kestrels are New Jersey's smallest and most colorful falcons, but unfortunately, they continue to experience a steep population decline here and throughout the eastern United States. Utilizing open farmlands and pastures where they hunt small mammals, birds, and insects, kestrels are cavity-nesters and have adapted well to nest boxes provided by people.

The ENSP's Nest Box Program has given biologists an intimate view of this bird's successes and failures – crucial to understanding and reversing their decline. Through this study biologists are able to document habitat characteristics and nest occupancy as well as hatching and fledging rates. They also keep track of individual birds by banding them.

As part of the program in 2022, biologists banded over 370 young kestrels prior to fledging and 46 adults. Of the adults, half had previously been banded and were documented individuals. The program also reached a new high for nesting kestrels with 114 pairs utilizing approximately 250 maintained and monitored nest boxes (a total that bests the pre-pandemic number of 72 pairs).

In addition, biologists took part in a regional population study in the eastern U.S. where they partnered with researchers at Pennsylvania's Hawk Mountain Sanctuary to collect data on prey abundance and habitat conditions. ENSP biologists also collected data through video monitoring of select nest boxes. This is the third year of the study which documents the prey delivered to kestrel nestlings so that researchers can gain a better understanding of the birds' diet in relation to productivity and the environment.

## Venomous Snake Response Team



*Venomous Snake Response Team  
Member Rob Auermuller demonstrates  
safe handling of a timber rattlesnake.*

New Jersey's reptile and amphibian population includes 23 snake species, two of which are venomous: the timber rattlesnake and Eastern copperhead. Since both species are rare here – the rattlesnake is state-endangered, and the copperhead is a candidate for threatened – the chance of encountering either species is low. However, ENSP biologists have long recognized the need to assist residents in the areas where people may overlap with these species.

Twenty years ago, the ENSP began actively recruiting and training volunteers for its Venomous Snake Response Team. Currently, the team consists of 75-100 active responders who relocate venomous snakes to adjacent forested habitat and educate local residents on the importance of these reptiles in the ecosystem and their generally docile nature. Responders also provide guidance on managing properties to minimize the length of time snakes occupy an area, and dispel any myths or negative attitudes of the local residents. While the majority of public complaints (nearly 90%) involve misidentified,

non-venomous snakes, every interaction is a chance to educate people about the positive aspects of native snake species and the importance of not harming them.

During this reporting season, 15 team members responded to 35 venomous snake calls, including 26 timber rattlesnakes, two Eastern copperheads and seven unidentified snakes that had moved away before responders arrived. ENSP staff also conducted training for 56 new volunteers, and the team has now grown to 108 responders statewide.

## **Office of Fish and Wildlife Health and Forensics**

### **Dr. Jan Lovy, Research Scientist**

The Office of Fish and Wildlife Health and Forensics conducts surveillance and research on diseases and chemical contaminants that affect New Jersey's fish and wildlife. Scientists in this office also recommend measures to combat diseases in NJFW's fish hatcheries and in free-ranging fish and wildlife populations. These scientists are the only available experts in New Jersey state government to specialize in wildlife pathology, fish pathology, and fish and wildlife toxicology. As a result, when fish and wildlife are dying in the Garden State, the public and other government agencies turn to the Office of Fish and Wildlife Health and Forensics to determine the cause and develop a response strategy.

### **Highlights**

#### **Terrestrial Wildlife Health Program**

Staff conducted NJFW's annual survey to monitor the status of Chronic Wasting Disease (CWD) in New Jersey's white-tailed deer population. CWD is a fatal neurological condition found in white-tailed deer and other members of the deer family. Rapidly transmissible between animals, it is vitally important that the presence of CWD remain outside New Jersey's borders. This year, 737 samples were tested. All were found negative, and New Jersey continues to be a CWD-free state.

An outbreak of Epizootic Hemorrhagic Disease (EHD) was detected in the fall of 2021 that impacted all 21 counties with over 1,000 deer reported dead. Several outbreaks of the highly pathogenic avian influenza, a potentially fatal disease that is extremely contagious between birds, were also confirmed in black vultures.

Dr. Lewis had two publications accepted in the Journal of Wildlife Diseases, one on the discovery of the bacterium *Edwardsiella tarda* in a Common loon, and the other regarding a health assessment of wild terrapins in South Jersey. Both articles are expected to be published in the coming months.

## Aquatic Animal Health Program

Data analysis was completed on a study to understand the cause of seasonal Atlantic menhaden mortalities off the New Jersey coast. Three separate events associated with dead and dying fish were related to a bacterial infection of the brain and other body systems. The bacterium was identified as *Vibrio anguillarum* and for the first time, was reported to cause neurologic disease. Further collaboration with the U.S. Geological Survey and the U.S. Department of Agriculture determined that the strain of bacterium was potentially lethal to Atlantic salmon and was being spread by the menhaden population. A manuscript of this work is in the final stages of development.

Annual health inspections of the state's two fish hatcheries were completed and both facilities tested negative for all pathogens tested. The fish were screened for viral diseases, including Viral Hemorrhagic Septicemia Virus (VHSV), Infectious Hematopoietic Necrosis Virus (IHNV), Infectious Pancreatic Necrosis Virus (IPNV), Spring Viremia of Carp Virus (SVCV) and Largemouth Bass Virus (LMBV). Fish were also tested for several bacterial agents, including *Aeromonas salmonicida*, *Yersinia ruckeri*, and *Renibacterium salmoninarum* (bacterial kidney disease in salmonids). Salmonids were also screened for the parasitic agent *Myxobolus cerebralis*, the source of whirling disease which causes head and spine deformities resulting in the telltale swimming pattern.

This year, staff initiated a new shellfish health surveillance program funded by the U.S. Department of Agriculture-Animal and Plant Health Inspection Service. In collaboration with staff from the Bureau of Shellfisheries, hard clams and Eastern oysters were collected from seven growers along New Jersey's Atlantic coast. The clams were screened for hemocytic neoplasia, a lethal disease scientists believe can be transmissible between clams. The oysters were also tested for dermo disease, haplosporidiosis (MSX) and oyster seaside haplosporidiosis (SSO). Staff will gather data to establish baseline levels of these pathogens for future research.



*Oyster samples are tested to detect pathogens.*

## Office of Environmental Review Kelly Davis, Principal Biologist

The Office of Environmental Review (OER) studies fish, shellfish, wildlife, and endangered species concerns related to state and federal permitting programs. Data is gathered on development projects that could potentially cause negative impacts on these species and their habitats. Biologists also review and provide recommendations for DEP's Land Use Regulation Program as well as the Bureau of Dam Safety and Flood Control, and the Solid and Hazardous Waste Program. In addition, the Office of Environmental Review provides input to federal agencies including the United States Army Corps of Engineers, Federal Energy Regulatory

Commission, United States Department of the Interior's Bureau of Ocean Energy Management, Federal Aviation Administration, and the Department of Defense.

### **Highlights**

During this reporting period, staff conducted 343 environmental review assessments, and attended 98 formal meetings on proposed projects throughout the state and off the coast. During these meetings, OER's findings are presented to the private and public organizations present along with recommendations to avoid, minimize, and if necessary, mitigate for potential impacts to fish and wildlife resources.



*Example of a reptile hibernacula under construction.*

During the review of an expansion proposal for the Gloucester County Improvement Authority's (GCIA) existing landfill, OER staff determined that the 71.34-acre grassland bird habitat mitigation area (created to mitigate for the displacement of grassland birds during the original landfill construction), had been moved to a different portion of the site. In addition, two hibernacula (winter shelters used by dormant species) that were to be created as mitigation for impacts to onsite reptiles, could not be found.

To address the concerns identified, GCIA agreed to provide biannual surveys of the habitat as well as recreate the hibernacula and regularly conduct studies to document the species relying on the structures. Further, GCIA has agreed to preserve and maintain these areas permanently in the future.

## **Bureau of Information and Education**

**Al Ivany, Chief**

The Bureau of Information and Education educates New Jerseyans about the needs and value of fish and wildlife. To do this, staff interprets information on biology, ecology, and conservation to help the public better understand the unique needs of each species as well as their environmental, recreational, aesthetic, and economic values. Outreach efforts also promote the wise use of these resources and the need to safeguard them for future generations.



## Highlights



### **Wildlife Habitat Supporter Program**

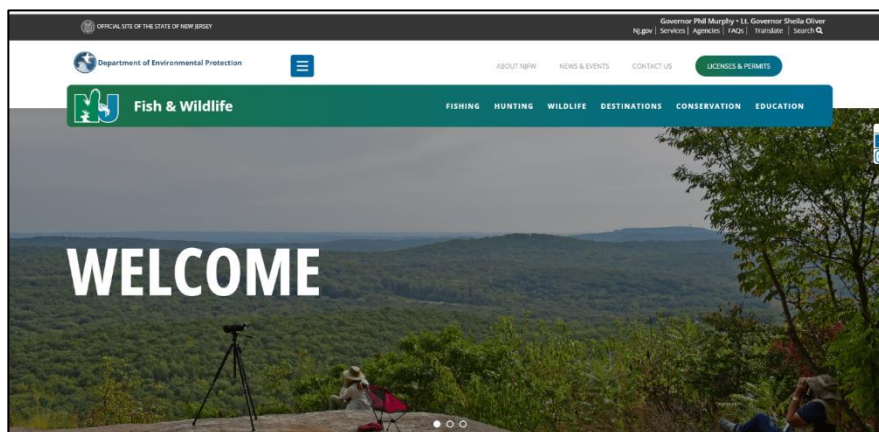
The Wildlife Habitat Supporter Program was officially launched in FY22 as a way to give supporters of wildlife and habitat conservation an opportunity to help fund important initiatives on wildlife management areas (WMAs) throughout the state. To promote the new program, NJFW hired a marketing firm to develop a multi-media campaign that would build awareness of the program, advance agency branding/recognition, and increase traffic to the newly designed website. Supporters who donate \$25 or more receive a first edition collectible decal.

As part of the campaign, special signage was also designed for display at the 30 most visited WMAs across the state to generate the interest of recreationists who had not purchased a license or permit as indicated by the results of NJFW's recent *New Jersey WMA User Survey*.

### **New Fish and Wildlife Website**

A comprehensive redesign of the original Fish and Wildlife website was completed in FY22. Staff from all areas of the agency worked extensively with a professional website developer to create a more modern and mobile-optimized site experience for users. The new website fosters engagement by creating a vibrant, active, and relatable platform to showcase the diversity and importance of New Jersey's natural resources.

It also offers Americans with Disabilities Act (ADA) functionality, so that all users can take advantage of the site's improved content structure and organization for the most user-friendly experience possible with unmatched access to customer services.



*In FY22, the public was introduced to NJFW's new modern and user-friendly website.*



## 77<sup>th</sup> Annual Northeast Association of Fish and Wildlife Agencies' Conference

NJFW hosted the 77<sup>th</sup> annual Northeast Association of Fish and Wildlife Agencies' Conference, April 3-5, 2022, at the Ocean Place Resort in Long Branch, Monmouth County. This year's conference was held in a hybrid format of in-person and online learning sessions that attracted more than 450 natural resource professionals and students across the Northeast in the fields of wildlife biology, fisheries management, outreach/education, and law enforcement. The theme *Power of Partnerships for Landscape Level Planning* encompassed more than 130 concurrent technical discussions, symposia, and workshops as well as a special plenary session, awards ceremony, numerous student events and other social activities. The conference was well-received by the fish and wildlife agency directors present and everyone who participated.

During the event, the Northeast Conservation Information and Education Association (NCIEA) honored New Jersey Fish and Wildlife Principal Biologist Michelle Smith with the 2022 *Information and Education Professional of the Year* award. Fish and Wildlife Assistant Commissioner Dave Golden presented the plaque on behalf of the NCIEA.

## Tuckahoe WMA Managed Waterfowl Hunt

The Tuckahoe WMA Managed Waterfowl Hunt is an important R3 program initiative launched by NJFW's Bureau of Information and Education in 2019 prior to the pandemic. The nationwide R3 movement is a concept that places a priority on recruiting, retaining and reactivating sportsmen and women – supporting and encouraging them to become active hunting, angling, and shooting sport participants. This is accomplished through three principal means: offering innovative programs and workshops, improving management strategies for wildlife species and habitats, and developing an enduring sense of conservation stewardship.

With this in mind, the objectives were devised to:

- Improve the overall quality of waterfowl habitat and hunting in and around the impoundments of the Tuckahoe WMA.
- Provide opportunities for *newly recruited or less experienced waterfowl hunters (RECRUIT)*.
- Afford new and improved experiences for *current waterfowl hunters (RETAIN)*; and
- Offer opportunities that alleviate access and overcrowding issues from negatively impacting the hunting experience which could *bring waterfowl hunters back to the sport (REACTIVATE)*.

### ***2021-22 Tuckahoe Managed Waterfowl Hunt Results Summary***

- Over 230 hunters participated with 180 scheduled hunt dates.
- 76% were satisfied with the hunt.
- 87% thought the program should continue.
- A special mentored waterfowl hunt was conducted with Ducks Unlimited to introduce novices (men, women, and youth) to the sport in a controlled environment.
- 29 hunting groups took advantage of the R3 program's Decoy Loaner Program.



### **Black Bear Outreach**

In FY22, the DEP earmarked \$1.5 million of its budget to expand non-lethal management methods regarding black bears. Some of this funding (\$345,000) was allocated for outreach which allowed NJFW to contract with a marketing firm to develop a statewide multimedia outreach campaign. Launched on April 5, 2022, promotional efforts were scheduled to run through July 24, 2022, and stressed the importance of residents and communities reducing the presence of bear attractants in their surroundings (i.e., trash, pet food, animal feed and bird seed) as well as offering key safety tips for successfully coexisting with black bears. The campaign's media mix included ads targeting bilingual communities using social media, search, digital, video, radio streaming, PSAs and e-mail blasts on multiple platforms and devices. Part of the promotion also included a redesign of the black bear webpages, and creation of a bear safety/education YouTube video for placement on NJFW's website and various social media platforms.

## **Office of Fish and Wildlife Information Systems**

**Patrick Woerner, Chief**

The Office of Fish and Wildlife Information Systems (OIS) develops and maintains GIS data, analyses, and web mapping applications. It also provides GIS/IT assistance to help guide strategic habitat conservation decisions and support fish and wildlife management throughout New Jersey.

### **Highlights**

#### **Freshwater Fishing Explorer**

In FY22, OIS introduced the New Jersey Freshwater Fishing Explorer web application, which combines two interactive web mapping apps: Great Fishing Close to Home and Trout Stocked Waters of New Jersey. OIS staff modeled the Freshwater Fishing Explorer application on its

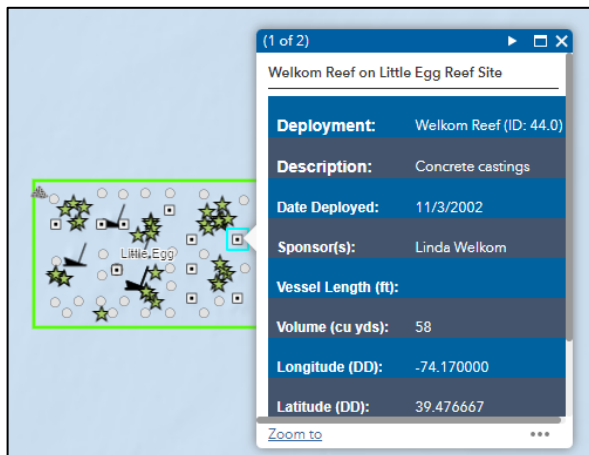


previously released and extremely popular Hunting and Trapping Explorer that is compatible with both desktop computers and mobile devices.

The Great Fishing Close to Home app makes it easy for anglers to search by species or location and get all the information needed to plan a successful trip. The application includes over 290 publicly accessible lakes, ponds and reservoirs picked by NJFW staff as quality fishing spots in the state. For each waterbody, the information provided includes a list of the primary sportfish present, ownership, whether a permit is required, if outboard motors are permitted, and the availability of other amenities such as access for people with disabling conditions, boat ramps, swimming areas, picnic areas, and camping sites.

The Trout Stocked Waters of New Jersey app shows all the lakes, ponds, rivers, and streams stocked by NJFW in the spring – a total of 181 waterbodies. Clicking on a water feature within the map will bring up the stocking schedule, number of fish slated for release and applicable closures. Links on where to purchase a license and how to report a suspected harmful algal bloom are also provided.

## Saltwater Fishing Explorer



*Example of details provided using the Artificial Reef Deployment interactive map.*

The Saltwater Fishing Explorer provides interactive maps and detailed information on artificial reef sites and other saltwater fishing opportunities in New Jersey. The Artificial Reef Deployment interactive map allows users to explore a network of nearly 4,000 publicly accessible artificial reefs off the coast.

Each reef map provides a wealth of information, including type of deployment, material used, sponsorship, and more. A Reef Deployment Feedback Form is also included for users to submit potential inaccuracies (staff will review and make revisions as necessary for subsequent versions).

The Saltwater Fishing Opportunities interactive map provides information on fishing sites that can be accessed by land or by boat (prime ocean fishing grounds and shore-based sites). Details such as description, directions and species present are highlighted for most areas.

## **Conservation Focal Areas Interactive Map**

The Conservation Focal Areas (CFAs) interactive map was designed to provide an easier way for users to access key geographic areas where conservation is most needed. Identified in New Jersey's Wildlife Action Plan, CFAs are portions of the landscape that are of particular interest to NJFW and its conservation partners because they contain important clusters of habitats and species. These areas also represent the best opportunities for protecting, restoring, and sustaining New Jersey's natural resource diversity.

Through this app, users can search and identify individual CFAs, obtain detailed descriptions of areas, and view lists of the habitat varieties present. Percentages of habitat types are also provided for each area.

## **Office of Mosquito Control Coordination**

**Scott C. Crans, Administrator**

Created in 1974, the New Jersey State Mosquito Control Commission's (SMCC) Office of Mosquito Control Coordination (OMCC) is based in NJFW's Trenton office. The OMCC coordinates state-funded programs that provide aid to county mosquito control agencies and serves as a public face on all state mosquito control matters. Actively collaborating with NJFW's various bureaus and across DEP is a priority, as is maintaining existing professional standards and developing new methods of mosquito control. These efforts ensure that county-based mosquito control agencies throughout the state are improving the public's quality of life by reducing mosquito populations in environmentally sensitive ways.

### **Highlights**

Public health mosquito control operations have not yet fully recovered from the impacts of COVID-19. County programs around the state continue to feel the strain of attempting to balance the need to protect the public from mosquito-borne illnesses with the complications caused by unchecked mosquito production during the pandemic.

Protecting staff during these difficult times has improved dramatically over the past year. The SMCC continues to support organized monthly virtual meetings for the state's mosquito control managers. These meetings serve to keep all 21 county programs functioning cooperatively while utilizing the state resources provided. Local program needs were addressed, and scientific support was provided as staff transitioned back into laboratory and field settings.

Emergency services and support were also provided to address the significant flooding that occurred near the end of the season following Tropical Storm Ida. Unfortunately, the storm occurred at a time when West Nile Virus was circulating throughout the state causing already strained state and county resources to become even more stressed.



## **Screening Samples**

Throughout the summer, staff continued to partner with several state, county, and university laboratories to screen mosquito samples as well as equine and avian blood samples for mosquito-borne viruses. This ongoing surveillance provides a critical early warning system for county mosquito control response efforts.

Sampling results indicate that FY22 was the third most active year for West Nile Virus (WNV) on record in New Jersey. The season started early and extended well into the fall. Positive samples appeared early on and remained at average levels until late July when activity increased dramatically. In total, 239,047 mosquitoes were sampled and examined for the virus. Because the sampling process tests pools of similar mosquito species and not individuals, the numbers are best understood when broken down into groups. Out of the 8,769 pools submitted for analysis, 997 tested positive for WNV.

Statewide testing for Eastern Equine Encephalitis (EEE) virus revealed a relatively active year. A total of 28 positive mosquito samples and three equine cases were detected out of a sampling of 7,923 pools (an estimated 210,877 mosquitoes).

Mosquitoes were also tested for Jamestown Canyon Virus (JCV), a type of encephalitis. Testing for JCV began in 2019 following activity seen in adjacent states. FY22 testing revealed eight positive mosquito samples from 8,235 pools (approximately 228,550 mosquitoes). Positive samples were detected in Atlantic (1) Camden (3), Essex (1), Gloucester (2), and Sussex (1) counties.

By far, of all mosquito-borne viruses in our state, WNV and EEE pose the greatest risk, although the travel-associated introduction of Zika, Chikungunya and Dengue viruses is also a concern. These exotic viruses are detected here in global travelers each year, but fortunately, local mosquito-borne transmission has not occurred in our state.

## **Zika Virus Initiative**

As part of DEP's continued Zika virus initiative, public awareness and outreach activities continue to prepare residents for the potential introduction of this disease. Since the federal grants earmarked for Zika virus support have expired, these educational efforts as well as the surveillance and control of exotic mosquito species are now supported through the SMCC.

## **Biological Control**

The Office of Mosquito Control Coordination continued its collaboration with NJFW's Bureau of Freshwater Fisheries to supply multiple species of mosquito larva-eating fish to county mosquito control agencies throughout the state. Biological control of mosquito populations is part of the state's Integrated Vector Management Plan and helps limit mosquito larvicide and adulticide use in certain areas.

This past season was again impacted by COVID-19. County programs stocked 201,133 fish to control mosquitoes throughout the state, a total higher than the previous year, but considerably lower than recent trends over the past five years.

### **Targeting Mosquitoes from Above**

The State Airspray Program experienced a relatively normal season with 22 state-contracted missions. This program is primarily directed at controlling immature mosquitoes in expansive fresh and saltwater habitats exposed to heavy rains and tidal activity. When conditions warrant, however, special operations directed at adult mosquitoes (especially when the rate of transmission is greatest) are offered to county programs needing assistance. This year, five county mosquito control programs requested aerial services. Costs to maintain the program have increased dramatically over the past few years.



*A State Airspray Program aircraft enroute to perform a larval insecticide application on a section of salt marsh in Atlantic County.*

## **Office of Business Administration**

### **Kim Springer, Chief**

The Bureau of Business Administration is comprised of five units, all supporting the mission and daily operations of NJFW: Office of Accounting, Grants and Contracts Unit, Office of Fish and Wildlife Information Systems, Office of Environmental Review, and Licenses and Permits Unit.

The Office of Accounting and the Grants and Contracts Unit are responsible for all financial accounting of NJFW's revenue and expenditures. The agency relies primarily on funds derived from the sale of hunting and fishing licenses and related stamps and permits. It also receives substantial federal funding from the Wildlife and Sport Fish Restoration Program. These dedicated-use funds, distributed as grants by the U.S. Fish & Wildlife Service, are a combination of manufacturer excise taxes on firearms, ammunition, archery and fishing equipment, motorboat fuels and small boat motors. Through their purchases, shooters, anglers and boaters participate in a unique "user-pays/user-benefits" system.

The Office of Fish and Wildlife Information Systems develops and maintains geographic data, conducts geospatial analyses, creates web mapping applications, and provides GIS assistance to guide important habitat conservation strategies, and support fish and wildlife management throughout the state. All of these web applications are accessible on NJFW's website and much of the data published is available on DEP's Open Data site.

The Office of Environmental Review (OER) evaluates and coordinates the review of various projects, plans and policies to ensure that New Jersey's fish and wildlife resources are protected.

These projects can include flood control and dredging, the construction/expansion of highways, sanitary landfills and water supplies, and residential/commercial development. OER routinely participates in DEP's permit coordination process and uses the Permit Readiness Checklist to help identify potential issues related to the protection of fish and wildlife resources. In addition, OER is responsible for reviewing and issuing letters of support for projects that align with NJFW's mission and goals.

The Licensing and Permits Unit is responsible for managing the New Jersey Electronic Licensing System (NJELS) and overseeing licensing agents. NJFW uses NJELS to issue hunting and fishing licenses and permits available for purchase online and at participating license agents.

The following chart illustrates revenue, appropriations, and expenses for FY22.

#### FY22 NJFW ANNUAL REPORT

<b>RESOURCES</b>	
General State Fund Appropriation Hunters & Anglers/Wildlife	4,852,000
General State Fund Appropriation Shellfish and Marine Fisheries	3,806,000
General State Fund Appropriation Endangered Species	220,000
<b>Subtotal GSF Appropriations</b>	<b>8,878,000</b>
Hunters & Anglers Licenses/Permits	13,337,634
Lease Revenue	1,347,394
Endangered Species Revenue (License plates and Tax Check-off)	345,033
Waterfowl Stamp Revenue	68,116
Miscellaneous Dedicated Account Revenue (Exotics, Sedge Island, Hooked on Fishing, Pump Out, Donations)	400,886
Shellfish and Marine Licenses/Permits	525,301
<b>Subtotal Revenues</b>	<b>16,024,364</b>
Federal Salary & Fringe Reimbursements	6,029,141
Federal Operating Funds	5,701,584
Carryforward funds available from prior years- Recurring Non-Federal accounts	6,254,374
Funds Reserved or Reverted by Treasury	(1,152,923)
Non-Federal Reimbursements and Transfers	852,639
<b>Subtotal Federal &amp; Other funding</b>	<b>17,684,815</b>
<b>TOTAL RESOURCES</b>	<b>42,587,179</b>
<b>EXPENDITURES</b>	
Hunters & Anglers/Wildlife Salaries (Includes seasonals, overtime, clothing allowances)	12,665,075
Shellfish and Marine Fisheries Salaries (Includes seasonals, overtime, clothing allowances)	4,801,879
ENSP (Includes seasonals, overtime, clothing allowances)	1,116,936
Hunters & Anglers Fringe Benefit Costs assessed by Treasury Office of Management & Budget	8,776,799
Miscellaneous Dedicated Expenditures (Exotics, Sedge Island, Hooked on Fishing, Pump Out, Donations)	430,138
Waterfowl Stamp Expenditures	135,000
Hunters & Anglers Operating (equipment, repairs, fuel, utilities, licensing vendor, etc...)	4,033,735
Shellfish and Marine Operating (equipment, repairs, fuel, utilities, etc...)	1,315,174
ENSP Operating (equipment, repairs, fuel, utilities, etc...)	44,675
Federal Operating Expenditures	5,615,108
DEP Assessments (Deputy Attorney Generals, DEP Division of Information Technology, Office of Administrative Law, Environmental Research Library, Rent, Training Office)	940,603
<b>TOTAL EXPENDITURES</b>	<b>39,875,122</b>
<b>*BALANCE</b>	<b>2,712,057</b>

\*Reflected balance includes funds in recurring non-federal accounts dedicated for specific purposes. Information as of 8/04/22.