

FY2014 Annual Report

July 1, 2013 – June 30, 2014



State of New Jersey
Department of Environmental Protection
Division of Fish and Wildlife



*Follow us on Facebook or
Visit our website at www.njfishandwildlife.com*

FY2014 Annual Report

State of New Jersey
Department of Environmental Protection
Division of Fish and Wildlife
Mail Code 501-03
P.O. Box 420
Trenton, NJ 08625-0420
www.njfishandwildlife.com

Chris Christie, Governor
Bob Martin, Commissioner
Dave Chanda, Director

Fish and Game Council

David Burke, Acting Chair
Cathy Blumig
Phillip Brodhecker
Joe DeMartino
Agust Gudmundsson
Jeffrey A. Link
Robert Puskas
Dan Van Mater

Endangered and Nongame Species

Advisory Committee

Dr. Barbara Brummer,
Chair
Dr. James Applegate
Dr. Joanna Burger
Dr. Emile DeVito
Howard Geduldig
Dr. Rick Lathrop
Dr. Erica Miller
Dr. David Mizrahi
Dr. Howard K. Reinert
James A. Shissias

Marine Fisheries Council

Richard N. Herb, Acting Chair
James Alexis
Dr. Eleanor Ann Bochenek
Warren Hollinger
Walter L. Johnson, III
Frances E. Puskas
Sergio Radossi
Joe Rizzo
Robert R. Rush, Jr.
Joseph A. Zaborowski

Atlantic Coast Shellfish Council

Walter L. Johnson, III, Chair
John J. Maxwell, Vice Chair
Walter Hughes

Delaware Bay Shellfish Council

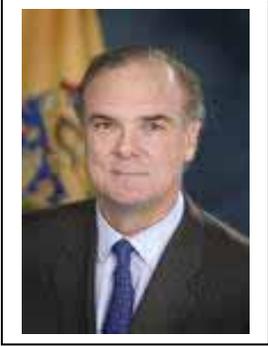
Warren Hollinger, Chair
Richard Malinowski, Vice Chair
Scott Bailey
Stephen J. Fleetwood

Waterfowl Stamp Advisory Committee

Robert Von Suskil, Chair
Peter Bacinski
Carl W. Blank
David Burke
Joe DeMartino
George P. Howard
Mike Kantor
Scott Paterson
Mike Shanahan
James A. Shissias
Lenore Tedesco

Wildlife Rehabilitators Advisory Committee

Kelly Simonetti, Chair
Donald Bonica
Phillip Brodhecker
Lisa DeLambert
Giselle Chazotte-Smisko
Tracy Leaver
Dr. Erica Miller
Diane Nickerson
Dr. Jennifer Norton



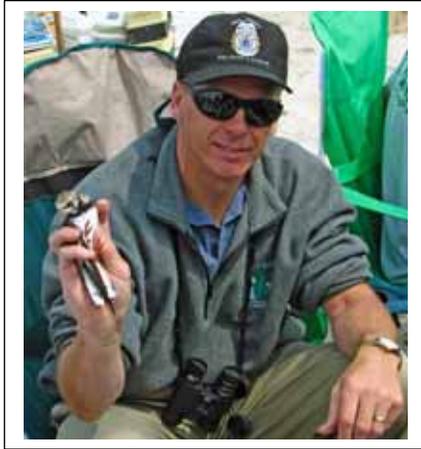
Message from DEP Commissioner Bob Martin

I am pleased to present the Department of Environmental Protection's (DEP) Division of Fish and Wildlife's Annual Report for Fiscal Year 2014 covering the period of July 1, 2013 to June 30, 2014. As in previous years, each section begins with an overview of a Division bureau or office along with several highlights from the year. Each page highlights the important work our professional fish and wildlife managers are involved in every day to protect and manage these species, the habitats they depend upon and the variety of recreational opportunities associated with New Jersey's wild outdoors.

Fish and wildlife add tremendous value to the economy and to our lives. Healthy populations support a variety of commercial and recreational uses contributing more than \$4 billion annually to the state's economy, supplying food, creating jobs (sporting goods stores, restaurants, gas stations, etc.) and just by simply adding aesthetic value to daily life. The importance of these resources is immeasurable.

With all this in mind, fish and wildlife management in modern society has become more complex as wildlife and people increasingly share the same space – and it can present some challenges. Differences of opinion about management decisions are inevitable and form the basis for healthy public debate. Responsible management requires well-grounded, science-based decisions achieved through an open and transparent process involving stakeholders and the general public. This is the model of decision making used for fish and wildlife, as well as throughout the Department, as an important component of DEP's transformation mission.

I want to acknowledge the support provided by the many council members, committee members, volunteers and conservation organizations that give so much of their personal time and contribute so much to fish and wildlife management in New Jersey. Working together we form an even stronger commitment to securing a future for fish and wildlife, so that all of these species remain a part of the Garden State landscape for generations to come.



FY 2014 – The Year in Review

Many positive accomplishments are highlighted in this report. Although a small agency, the New Jersey Division of Fish and Wildlife (Division) performs a tremendous service that benefits all nine million residents. The outstanding service Division employees provide to our constituents and the variety of fish and wildlife that live in our State is incredible; our success stories are many and for that we should all be proud.

More than 800 species of wildlife call New Jersey their home. These are all species that contribute to the quality of life for those of us who live, work and vacation in the Garden State. The fact that New Jersey has such a healthy and diverse population of wildlife can be attributed in part to the Division of Fish and Wildlife's efforts. Without question, the greatest strength of the Division is its workforce. Our employees work with great zeal to identify new and innovative ways to get the job done. These professionals receive tremendous support from almost 500 volunteers through the Division's Wildlife Conservation Corps (WCC) program. WCC partners assist in the areas of research and management, aquatic education, and hunter education. To these volunteers I offer an enormous thank you—we couldn't do it without your support.

Perhaps the biggest challenge facing this agency is the ability to achieve its mission to protect and manage NJ's fish and wildlife species for long-term biological, recreational and economic value. During this report period we said farewell to several dedicated employees through retirements. We wish them well as they enter the next phase of their life's journey, and know that replacing such highly trained professionals and the institutional knowledge they possessed will be difficult.

Moving forward, I have tasked the Division's administrative team with developing an approach to align the existing workforce with mission-critical responsibilities. This effort will position our agency to meet the challenges and opportunities that lie ahead, especially in developing and identifying new program focal areas and forging new partnerships. I know that the Division's talented professionals will guide our agency into the future and continue to protect and manage New Jersey's fish and wildlife resources and to provide outstanding experiences for outdoor enthusiasts.

Sincerely,

David Chanda, Director
NJ Division of Fish and Wildlife

New Jersey Division of Fish and Wildlife

The New Jersey Division of Fish and Wildlife is a professional, environmental organization dedicated to the protection, management and wise use of the State's fish and wildlife resources.

Our Mission

To protect and manage the State's fish and wildlife species to maximize their long-term biological, recreational and economic values for all New Jerseyans.

Our Goals

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

Table of Contents

Bureau of Freshwater Fisheries.....	6-7
Bureau of Land Management.....	8
Bureau of Law Enforcement.....	9-11
Marine Fisheries Administration.....	11
Bureau of Marine Fisheries.....	11-12
Bureau of Shellfisheries.....	12-13
Bureau of Wildlife Management.....	14-15
Endangered and Nongame Species Program.....	15-16
Office of Fish and Wildlife Health and Forensics.....	17
Office of Environmental Review.....	18
Office of Information and Education.....	19-20
Office of Mosquito Control Coordination.....	20-21
Office of Business Administration.....	21
Finance Chart.....	22

Bureau of Freshwater Fisheries

Lisa Barno, Chief

The Bureau of Freshwater Fisheries is responsible for the propagation, protection, and management of the State's freshwater fisheries resource as well as promoting its recreational use. In addition to raising and distributing more than 3.5 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 general public in a variety of forums concerning New Jersey's freshwater fisheries. The Bureau also administers more than 600 permits annually to help effectively manage and protect this important resource.

Highlights

Staff is providing technical assistance for the Musconetcong River Restoration Partnership project. In October, the U.S. Department of Interior announced that \$1 million would be awarded to the Musconetcong Watershed Association for the removal of the Hughesville Dam in Warren County (a portion of the funding under the Disaster Relief Appropriations Act has been dedicated toward mitigation and resiliency projects such as this one as a result of Hurricane Sandy). Plans to remove the Hughesville and also the Warren Glen dams will greatly enhance fish passage and improve water quality in the lower Musconetcong River.

The Bureau's fish culture component includes the Pequest Trout Hatchery in Oxford and the Charles O. Hayford Hatchery in Hackettstown. During this reporting period, Pequest raised 614,833 trout for the 10-week Spring Stocking Program. An additional 22,225 trout were reared for the Fall and 5,000 more for the Winter Stocking programs. The hatchery also provided 15,840 brown trout for the Division's Sea Run Brown Trout Program in the Manasquan River.

During this same period, staff at the Hackettstown State Fish Hatchery raised and stocked a total of 3,689,131 warmwater fish of 15 different species in over 130 waterbodies throughout the State. Species included: landlocked salmon, northern pike, muskellunge, tiger muskie, walleye, striped bass hybrid, channel catfish, largemouth and smallmouth bass, brown bullhead, bluegill sunfish, black crappie, fathead minnows, golden shiners and mosquitofish.

Staff stocked approximately 200 salmon in Tilcon Lake, Morris County this spring. The fish were originally obtained as fingerlings (8-inches) in May 2013 from the Massachusetts Department of Fish and Game in exchange for surplus northern pike from the Hackettstown Hatchery. These salmon were held at the hatchery for nearly a year so they could be grown and stocked at a much larger size (15-20 inches). Anglers have already reported catching these fish in addition to larger salmon stocked the previous fall in lakes Wawayanda and Aeroflex that averaged 14 inches at the time of release. The

hatchery's ability to grow salmon to a larger size for stocking is paying dividends in this successful program.

New Jersey is home to nearly 60 native fish species that form a major component of the State's aquatic diversity. While many native species are common and widely distributed, there are also some posing conservation concern including several types of shiners and a number of sunfish. Many factors including land use changes, habitat loss, decline in water quality and presence of invasive species threaten the survival of all aquatic life, particularly those most sensitive. As part of current conservation efforts, biologists have compiled and entered data from sampling studies conducted between 2000 and 2012 to create distribution maps for all native freshwater species. This is the first time the bureau has been able to assemble data locations by species and generate maps utilizing GIS software.



The Ken Lockwood Gorge, a 2.5-mile section of the Raritan River South Branch was surveyed to assess the fish assemblage and evaluate the current Year Round Trout Conservation Area regulations. Two surveys were conducted at locations routinely monitored every few years. Known for its great scenery and fish habitat, the Gorge is very popular among fly anglers. This section of the river is stocked by the Division in the spring and fall,

and has seen an increase in the amount of naturally reproducing trout in recent years. In fact, recent data warrants an upgrade in New Jersey's Surface Water Quality Standards from *Trout Maintenance* to *Trout Production* with the presence of very young brown trout and to a lesser extent, wild rainbow and brook trout. Facilitating the positive report were particularly favorable conditions for trout given the above average rainfall and subsequent stream flows during the summer of 2013.

Due to an outbreak of furunculosis (an infectious bacterial disease affecting coldwater species of fish such as trout) at the Pequest Trout Hatchery during the fall of 2013, staff took many precautions and utilized several sterilization methods to eradicate the bacteria from the facility. Although not uncommon to fish culture operations, this is the first time the disease was documented at this facility, which employs strict fish health protocols. The bacteria was most likely introduced through predatory birds, such as osprey and great blue herons, that were particularly problematic. The disease affected both brook and brown trout. Since the hatchery's rainbow trout strain was found more resistant to the disease, Pequest will temporarily shift production efforts to primarily rainbow trout for the next several years.

Bureau of Land Management

Tony Petrongolo, Chief

The Bureau of Land Management (BLM) is responsible for administering the Division's Wildlife Management Area (WMA) System which now comprises more than 344,000 acres on 121 separate areas. These areas are managed for a diversity of fish and wildlife species through a variety of habitat improvement programs. Public access for wildlife-associated recreation is encouraged through the development of visitor facilities, maintenance of roads and bridges, and the construction and maintenance of parking areas and boat ramps. The Bureau is also responsible for the maintenance of Division facilities including buildings, shooting ranges, dams and water control structures. In addition, the BLM offers technical assistance to the State's Green Acres Program in the acquisition of open space and critical fish and wildlife habitat.

Highlights



More than 2,400 acres were assigned to the Division's Wildlife Management Area System during this report period. Most of this acreage will be added to existing WMAs to increase recreational opportunities, enhance accessibility and in some instances, connect adjacent parcels of land together.

The project to replace the existing boat ramp at Spicer's Creek in Cape May was completed. A brand new concrete ramp and restored floating dock are now in place and the parking lot was refurbished as well. A new boat ramp and fishing dock were also completed at the Great Bay Boulevard WMA in Ocean County. Funding was provided through Garden State Parkway mitigation monies.

Staff developed a GIS program focusing on the pheasant enclosures at the Rockport Game Farm in Warren County so that staff could design, schedule and track plantings to maximize space for pheasant-rearing operations. In order to grow and maintain adequate cover for the pen-reared birds, a variety of plantings were tested and evaluated as was a more aggressive approach to controlling invasive plant species.

Biologists met with representatives from Evergreen Environmental to discuss a wetland restoration project on the Dix WMA in Cumberland County. The company owns property adjacent to this tract and will assist the Division in this endeavor. The area is home to several species of shore birds. Biologists hope to restore their habitat, which has been invaded by reeds and to develop a drainage system to properly channel the brackish water that accumulates there.

Bureau of Law Enforcement

Mark Chicketano, Acting Chief

The Bureau of Law Enforcement is responsible for enforcing regulations that protect wildlife and its habitat. Highly trained conservation officers patrol the State and its waters using the latest in law enforcement technology. These officers investigate all types of cases, including hunting and freshwater fishing violations, illegal marine and shellfish harvesting, collection and sale of endangered species, and even water pollution.

Conservation officers are among the Division's most visible representatives, interacting with thousands of individuals each year. In the field, they educate and redirect the actions of recreationists to ensure compliance with Division policies, the Fish and Game



Codes, marine conservation measures and other land use regulations to protect the environment as well as ensure that people enjoy our natural resources in safe and ethical ways.

As the oldest organized law enforcement agency in the State of New Jersey (created in 1871), conservation officers have a storied history. Originally tasked strictly with fish protection in the Delaware River, officers now delve into every area of fish, wildlife and natural resource protection.

They now enforce pollution laws involving New Jersey's forests and waterways, impose bans on the harvest of crabs from polluted waters, enforce clamming and oystering regulations designed to safeguard public health, assist with efforts to control nuisance bears, enforce commercial and recreational saltwater fishing regulations, protect State lands from illegal timber sales and off-road vehicle usage, and ensure the lawful handling of exotic wildlife and the sale of legally procured marine resources.

Conservation officers are also the primary law enforcement personnel in the State of New Jersey authorized to investigate hunting accidents or fatalities. They are uniformed officers with full law enforcement authority.

Each year, conservation officers provide countless hours of public outreach at educational facilities, outdoors shows and through the course of their daily patrols. Educating hunters, anglers and the general public about their environment and all that makes it beneficial is a paramount assignment that conservation officers are proud to perform.

Highlights

Conservation officers conducted a joint investigation with the Pennsylvania Game Commission involving the alleged illegal commercialized sale of striped bass in Salem and Cumberland counties. The investigation began when conservation officers identified an organized ring of commercial fishermen allegedly selling striped bass illegally (striped bass are classified as game fish in New Jersey and as such, may not be sold or offered for sale). Spanning two years, the case resulted in criminal and civil charges filed against eight individuals. If convicted the maximum penalties for each individual range from \$6,000 to \$1,196,000.

After gathering video evidence over a three-month period, conservation officers and U.S. Fish and Wildlife Service (USFWS) special agents issued a search warrant in Somers Point, Atlantic County regarding a case they were jointly investigating. Various birds of prey had been found dead in a neighborhood where a person had been feeding squirrels. The raptors were collected and analyzed by the USFWS with lead projectiles the apparent cause of death. An air rifle was found at the individual's back door that matched the caliber found in the birds. Over the course of the investigation, approximately 100 strikes were found in the neighbors' houses and out buildings. There are also four non-target impacts on surrounding houses currently being investigated by Division conservation officers. These proceedings will be initiated after the conclusion of the federal cases. New Jersey charges include careless discharge, damage to property, hunting out of season, hunting with an illegal firearm, using an illegal missile and taking of non-game species.

Over the course of two successive weekends in the Newark Bay Complex, conservation officers issued 119 summonses for possession of undersized striped bass, exceeding the daily limit of striped bass, wanton waste of marine fish, littering while fishing and interference with the duties of a conservation officer. The officers infiltrated a construction site that was reportedly being run as a "private fishing area" by a night security guard. The guard was allegedly paid a fee by anglers he allowed to fish inside the gated site. On one occasion the officers contacted eight anglers in the early morning hours who were collectively in possession of 75 undersized striped bass.

Conservation officers received information regarding a vehicle struck by shotgun pellets while traveling on the NJ Turnpike in the area of Middlesex and Mercer counties. According to the driver, he was traveling south with additional family members following in a separate vehicle. Somewhere between the Cranbury Service Plaza and Exit 7A, the travelers heard a loud bang, at which time passengers from the second vehicle turned and saw two hunters in a wooded area adjacent to the Turnpike. When the family members stopped at a rest area just over the Delaware Memorial Bridge, they noticed what appeared to be a bullet strike in the right rear passenger door of the first vehicle and a hole in the taillight. After calling 9-1-1, they were eventually put in contact with conservation officers who later examined the vehicle, which appeared to have been struck with two buckshot pellets. After speaking with one of the passengers who claimed to have seen the hunters, the officers patrolled the 10-mile stretch of road and conducted several interviews of individuals who had reportedly been hunting in the area that day.

From this information they were then able to narrow the search down to a patch of woods in Robbinsville Township, Mercer County and to a specific group of hunters. This led them to three individuals from Bergen County. Officers were then able to identify the hunter who had allegedly shot at a deer and struck the car. The hunter was charged with careless discharge of a firearm, damage to property and discharging a firearm across a roadway.

Marine Fisheries Administration

Brandon Muffley, Administrator

The Marine Fisheries Administration (MFA) includes the Bureaus of Marine Fisheries and Shellfisheries. The MFA supervises and coordinates the planning, organization, operation and management of the marine and estuarine finfish and shellfish resources of New Jersey, which are worth more than \$2 billion. The MFA 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.

Bureau of Marine Fisheries

The Bureau of Marine Fisheries is responsible for developing and implementing management programs that 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 dependent upon them. These data are also 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 (ASMFC) and/or the Mid-Atlantic Fishery Management Council. The Bureau 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 ASMFC. 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

In an effort to collect data on river herring, staff sampled the Maurice River, including the fish ladder at Union Lake in Cumberland County during 2013. Unfortunately, no river herring were collected in the trap or observed in the lower sections of the ladder during the monitoring segment. Noteworthy however, the fish trap did block more than

4,214 egg-laden sea lampreys (a highly destructive species) from entering the impoundment.

In April, marine fisheries biologists deployed acoustic receivers in Delaware Bay to track migration patterns of Atlantic sturgeon. For a third year, 19 receivers have primarily been set in water depths of less than 20 feet. White buoys labeled “NJDEP Research” marked the locations of receivers. The study is part of a multi-state collaborative effort to provide state, federal and regional management authorities with long-term information necessary to successfully conserve and ultimately restore the population of this endangered species in the Mid-Atlantic Region. Data is downloaded monthly from each receiver to detect movement of sturgeon tagged with acoustic telemetry tags. In FY14, receivers recorded 31,401 detections from 233 different fish.



During this reporting period, the Division of Fish and Wildlife championed Fisheries Disaster Direct Assistance Grants for individuals and businesses in New Jersey's fishing industries that have documented uninsured losses as a result of Hurricane Sandy. Approximately \$2.3 million in federal funding was approved by the National Oceanic and Atmospheric Administration for the Garden State. The Fisheries Disaster Funds will be distributed as direct assistance grants to provide up to \$10,000 per individual or business for eligible losses.

Each year, biologists conduct a Delaware River Seine Survey. In August, September, and October, several sites are surveyed along the river. Fish are caught using a seine net, sorted and recorded. Most notably in FY14, the shad young-of-year (juvenile fish) index was the highest in 34 years! Historically, American shad have spawned in the Delaware River, as well as in several of its tributaries and a high index such as this is a positive indicator that diligent efforts to improve water quality are paying off.

Bureau of Shellfisheries Russ Babb, Acting Chief

The Bureau of Shellfisheries directs shellfish harvest and production programs on the Atlantic Coast and in Delaware Bay. Staff members work with the Division's bureaus of Marine Fisheries and Law Enforcement as well as other state and federal agencies to formulate and implement plans to conserve marine habitat and manage the State's shellfish resources. Staff members also work closely with the New Jersey Shellfisheries Council, an advisory board to the DEP Commissioner, on issues related to the protection, enhancement and management of shellfish. Staff members are actively engaged in fostering aquaculture development and reviewing coastal development activities to protect critical habitat. These biologists are also managing surf clams in the Atlantic Ocean and oysters in Delaware Bay as well as examining the impacts of offshore sand mining. In addition, the Bureau is responsible for administering a licensing program for

recreational and commercial shellfishermen as well as the State's Shellfish Aquaculture Program.

Highlights

A post-Sandy evaluation of shellfish and submerged aquatic vegetation (SAV) habitats in Barnegat and Little Egg Harbor bays was completed during this time period. A total of 140 stations were sampled (approximately 25-percent of the total stations sampled during a standard comprehensive survey). Data collected during this evaluation will help determine if there were any negative impacts from Hurricane Sandy. The information obtained from the truncated survey will be incorporated into the final report of the 2012 Barnegat Bay estuarine inventory.

Staff was responsible for creating a Shellfish Aquaculture Working Group to promote better communication between government and local aquaculturists as well as foster collaboration between the various state and federal organizations responsible for shellfish aquaculture permitting and management processes in New Jersey. The initial step asked government representatives to provide a summary of the requirements that a prospective applicant must meet in order to receive a permit from that agency to operate their business in New Jersey waters. The exercise will help pinpoint possible weaknesses and



streamline solutions to better guide applicants through the often lengthy and complex permitting process.

A comprehensive Surf Clam Stock Assessment Survey was completed in 2014 for New Jersey territorial waters from Shark River to Great Egg Harbor. Conducted annually since 1988, the results of the 2014 survey indicate that the population continued to decline as a result of mature clam loss and lack of recruitment (the 2014 standing stock of surf clams in New Jersey Territorial waters is an estimated 325,000 bushels, which is a significant decline from the 26 million bushels estimated in 1997). The magnitude of decline appears to be a regional event, as a reduction in the surf clam population has also been documented off Federal waters within the mid-Atlantic region: Southern Virginia, the Delmarva Peninsula and New Jersey inshore waters with greater abundance in waters off New York, New England and further off the coast of Northern New Jersey. Some scientists point to the intrusion of warm water onto the Mid Atlantic Shelf over the past decade as a possible cause for the decline. Hurricane Sandy is also believed to be a cause for the absence of surf clams off Long Beach Island, Brigantine and Absecon Island, as remnant populations were present prior to the storm and are virtually non-existent in these areas now.

Bureau of Wildlife Management

Dave Golden, Chief

The Bureau of Wildlife Management provides the scientific information and recommendations necessary to develop conservation programs for New Jersey's game species. It also manages breeding operations for the Division's game bird stocking program and assists the public in reducing damage caused by wildlife. Biologists (with conservation officers from the Division's Bureau of Law Enforcement) respond to emergency situations between humans and wildlife, and 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 as well as assess the impacts of urbanization. The information collected is of critical value to the Fish and Game Council, which relies on it to determine New Jersey's annual hunting and trapping regulations.

Highlights

Deer Project biologists are working with the Division's Hunter Education Unit to expand current course materials to incorporate more detailed information on deer hunting and the important role it plays in conservation. The current curriculum already explains the concept, but information specifically directed to hunters about how they participate in wildlife management and the importance of harvesting female deer to control populations will be added.

Coyote sightings were summarized by county and municipality for 2013. A total of 140 sightings were reported. Coyotes were seen for the first time in nine municipalities: Somers Point in Atlantic County, Elmwood Park Boro, North Arlington and Ridgefield Park Boro in Bergen



County, Medford Lakes in Burlington County, East Orange and Essex Fells in Essex County, and Red Bank and West Long Branch in Monmouth County. The entire database currently contains 8,975 records from 409 municipalities in all 21 counties. The widespread range of this species is a testament to the coyotes' ability to adapt and thrive in all types of habitat – even in some of the most highly urbanized areas of the state.

On October 19, an Open House for pheasant and quail hunters was held at the Division's Rockport Game Farm in Warren County. Nearly 700 people took advantage of the opportunity to tour the facility, which was recently renovated and modernized. The game farm has been producing and stocking birds since 1923 and the quality and reputation of "Rockport Rockets" is known throughout the country.

Results for New Jersey's portion of the 2014 Mid-Winter Waterfowl Survey totaled 518,000 birds of 29 different species. In an average year, about 15-percent of the total waterfowl in the Atlantic Flyway are estimated to be in New Jersey. Important species that make up a significant portion of the flyway total that are counted in the Garden State include: Atlantic brant, black ducks, snow geese, Canada geese, bufflehead, mute swans, mallards and scaup. The 2014 count with comparisons to their latest 10-year average showed an increase in the black duck population (+27%, the third highest count ever recorded) and bufflehead (+161%, a record high). Conversely, the Atlantic brant estimate was the third lowest observed since 1984.

Small Game Project biologists completed a Habitat Survey for southern New Jersey. An estimated 5,875 acres of private and public land in southern New Jersey utilize some type of management activity that is beneficial to bobwhite quail and other early successional species, as well as wildlife that depends on habitat comprised of young trees and shrubs like woodcock, fox, rabbit and several species of grassland birds. Acreage enrolled in the Federal Grassland Reserve and State Acres for Wildlife Enhancement programs totaled 1,165 and 657, respectively. This is especially promising for helping declining species, such as quail, rebound in New Jersey.

Bureau staff continued to collaborate with several universities and organizations on studies to learn more about the biology and behavior of black bears. Partnerships include East Stroudsburg, Rutgers, Fordham and Utah state universities as well as Bear Trust International and the International Association for Bear Research and Management. The Association's Human Bear Conflicts Expert Team is currently analyzing the effectiveness of raising and releasing captive-reared orphaned bears into the wild. New Jersey has the only long-term data set on the reproductive success of rehabilitated bears in the *world*. This data is being used to enhance management practices for bear species on a global level, many of which are endangered.

Endangered and Nongame Species Program

Dave Jenkins, Chief

The Endangered and Nongame Species Program (ENSP) was created in response to the enactment of the New Jersey Endangered Species Act of 1973. More than 80 endangered and threatened species inhabit the Garden State, and many more stop here to rest and refuel during their migrations. To protect these species, the ENSP is committed to conserving New Jersey's biological diversity by working to maintain and foster endangered and threatened populations as well as protect the unique habitats on which they depend. The ENSP is also responsible for administering the State Tax Check-Off for Wildlife, which benefits these species.

Highlights



The Division's Endangered and Nongame Species Program has taken the lead on coordinating a new project to reconnect New Jersey's fragmented landscapes by creating passageways for fish and wildlife to travel safely across roadways in densely populated areas of the State. The goal of the project, Connecting Habitats Across

New Jersey (CHANJ), is to maintain and restore existing structures like culverts, fish ladders and natural bridges so that fish, reptiles and other wildlife can travel unimpeded as they search for food, shelter and breeding areas. Though in its early stages, biologists eventually hope to create new structures and pathways to further expand the network between habitat fragments.

During this report period, ENSP staff and volunteers documented 119 active bald eagle nesting pairs. Also during this time, the remains of two banded bald eagles were recovered. This is significant because one of the birds had fledged a Division-created nesting site at Dividing Creek, Cape May County in 1988. It was found in Aberdeen, Maryland where it had probably nested since maturing in the early 1990s. The other fledged in 1989 from a similar site at the Tuckahoe WMA in Cape May County and was found at the Nantuxent WMA near Cedarville, Cumberland County. These birds were 25 and 24 years old, respectively, and learning about them adds another important dimension to the story of successful bald eagle recovery efforts in New Jersey.

During its annual pre-emergence survey of bats in the Hibernia Mine (Morris County), ENSP staff noted a decline in numbers from last year. A total of 440 bats were counted as compared to 575 the year before. The decline is the result of a deadly fungus known as White-nose Syndrome which has had a devastating effect on the population over the past several years. To find ways to help the population recover, 30 infected bats were removed from the mine and taken to the Bat Sanctuary of New Jersey to determine if supportive care would help the animals build up their immune systems to fight the disease. Once healthy, the majority of bats will be returned to the mine and studied. The rest will be held in captivity in an attempt to start a breeding program. If successful, the results will provide important information regarding captive breeding and its potential to save bat populations from decline.

Office of Fish and Wildlife Health and Forensics

William Stansley, Research Scientist

The Office of Fish and Wildlife Health and Forensics (OFWHF) 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 manage diseases in the Division'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 this office to determine the cause and develop a response strategy.

Highlights

Staff submitted a manuscript describing a study on rodenticide exposure in red-tailed hawks and great horned owls in New Jersey, which was published in the January 2014 issue of the Bulletin of Environmental Contamination and Toxicology. The study was conducted in collaboration with researchers at the University of Pennsylvania's School of Veterinary Medicine.

Since 1997, OFWHF staff have tested 5,621 wild deer for Chronic Wasting Disease (CWD) and failed to detect its presence in New Jersey's wild deer population. Scientists believe that CWD is caused by an abnormally shaped, infectious protein called a prion which causes fatal damage to the brain and central nervous system of mule deer, rocky mountain elk and white-tailed deer. Symptoms include loss of body condition and altered behavior. There is no evidence that the disease is linked to disease in humans or domestic livestock other than deer and elk.

In May, staff investigated a massive fish kill in Shark River (Monmouth County). The majority of the fish affected were menhaden. Based on the patterns of mortality and behavioral signs of the fish, the kill was most likely related to oxygen depletion. The likely scenario was that schools of menhaden were chased into the river estuary by predators such as bluefish, striped bass and dolphins. Such a large concentration of fish in a small area quickly depleted oxygen levels. In addition, the kill happened during the morning hours when oxygen levels are normally at their lowest point. Studies showed the fish to be otherwise healthy with no other signs of disease.

Staff drafted a management/response plan for several viral diseases that could potentially affect fish at the Division's two hatcheries. The document provides information about the diseases and summarizes actions to be taken to prevent their introduction as well as what to do should any be found.

Office of Environmental Review

Kelly Davis, Principal Biologist

The Office of Environmental Review (OER) coordinates wildlife, marine fisheries, shellfisheries, freshwater fisheries and endangered species concerns into state and federal permitting programs. The input provided protects, maintains and enhances fish and wildlife species and their habitats through environmental review of any development projects that may pose negative impacts. Prior to construction, OER provides recommendations to eliminate or minimize these impacts. Biologists regularly review and provide comments or recommendations on permits/projects for the DEP's Land Use Regulation Program (Waterfront Development, Coastal Area Facility Review Act and Stream Encroachment sections) as well as the Bureau of Dam Safety & Flood Control, and the Solid & Hazardous Waste Program. The OER also offers input to Federal agencies including the Army Corps of Engineers, Federal Energy Regulatory Commission, Bureau of Ocean Energy Management, Federal Aviation Administration and the Department of Defense.

Highlights

Staff conducted **221** environmental review assessments on projects throughout the State.

Staff met to discuss transforming a brownfields property into a park for use by the residents of Camden County. The necessity of utilizing timing restrictions to protect sturgeon and concerns for the disturbance of freshwater mussels were offered for proposed shoreline restoration efforts. The 5.3-acre site will eventually be transformed into an assemblage of trees, meadows, walking paths and scenic views of the Delaware River. It is part of a multi-phase project to restore the shoreline embankment, provide fishing access and restore habitat for shorebirds and other wildlife.

The OER and NJDEP's Blue Acres Program met with Federal and State Agencies to discuss shoreline restoration in Lawrence Township, Cumberland County. The Blue Acres Program purchases properties from willing sellers impacted by Hurricane Sandy. Restoration efforts would include maintaining the sandy beach areas that provide habitat for many species and removing any debris that has become an obstruction. Any work conducted in this area would require restrictions to protect horseshoe crab and oyster habitats as well as reproductive grounds for sandbar sharks and the fish migratory pathway located in the area's creek.

Office of Information and Education Chief, Vacant

The Office of Information and Education educates thousands of New Jerseyans on the needs and values of fish and wildlife. As more and more families choose to reside in rural areas of the State, this type of education is critical if residents and wildlife are to successfully coexist together. 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 economic, aesthetic, environmental and recreational values. Outreach efforts also promote the wise use of these resources and the need to safeguard them for future generations.

Highlights

The Division's Trout in the Classroom program is a science-based educational activity that teaches children about conservation through a unique hands-on approach. Schools across New Jersey receive brook trout eggs in mid-October from the Pequest Trout Hatchery. Students then hatch and raise the trout, monitor water quality, learn fish biology, anatomy and more. At the end of the school year, the trout are released into select approved streams. Currently, staff coordinates the program for 119 New Jersey schools in urban, suburban and rural areas with more than 14,000 students participating. In addition, staff produces a monthly teaching supplement entitled *Scale Tales* for distribution to educators involved in the program.



Six New Jersey schools sent 63 archers to the National Shooting Sports Program's National Tournament in Louisville, Kentucky, May 9-11 (the largest turnout from our state to date). A total of 10,443 youngsters participated in the shooting line, which is over ¼-mile long making it the largest competition in the world. The top New Jersey team results were:

- Oxford Central School (Middle School Division): team score of 3,263; ranked 25 out of 197 middle schools.
- Angelo L. Tomaso Elementary School (Elementary School Division): team score of 2,998; ranked 45 out of 114 elementary schools.

- The top shooter from New Jersey was Sara Quigley from Oxford Central School with a score of 286. She ranked 23rd out of 2,024 middle school girls.

Each month, staff from the Office of Information and Education receive and answer an average of 320 inquiries from the public through the Division’s website. In FY14, approximately 3,840 questions were answered on topics as diverse as white-tailed deer biology to horseshoe crabs. Maintaining a connection with those who enjoy and are concerned about fish and wildlife remains a top priority.

New Jersey received first and second place in the 2013 Association for Conservation Information’s (ACI) Awards Contest for its Freshwater Fishing and Hunting & Trapping digests, respectively. ACI is a non-profit association of information and education professionals representing state, federal and Canadian agencies as well as private conservation organizations. The annual contest recognizes excellence in more than 25 categories and promotes craft improvement through competition. Professionals from both the public and private sector evaluate entries and offer written, constructive critiques. New Jersey has placed in this category numerous times in the past for its regulations publications as well as for its award-winning website.

The 23rd Annual Governor’s Surf Fishing Tournament was held on May 18 at Island Beach State Park. Traditionally held in October, the date was changed to take advantage of better weather and a wider variety of fish species as well as usher in the busy tourism season. The sunny spring day brought nearly a thousand people to the beach, including 600 registered participants. Grand prize was awarded for a 36-inch bluefish. The tournament was sponsored by the Division of Fish and Wildlife, Division of Parks and Forestry, New Jersey State Federation of Sportsmen’s Clubs, Jersey Coast Anglers Association and the New Jersey Beach Buggy Association. Proceeds from the event are dedicated to improving beach access and promoting conservation education.

Office of Mosquito Control Coordination
Eric Williges, Administrator

Created in 1974, the New Jersey State Mosquito Control Commission’s Office of Mosquito Control Coordination (OMCC) is based in the Division’s main office in Trenton. The OMCC’s purpose is to coordinate programs funded by the State Mosquito Control Commission and serve as a public face on all State mosquito control matters. Actively collaborating with different bureaus in the Division and the Department is a priority as well as maintaining existing standards and developing new methods of mosquito control. These efforts ensure that county mosquito control agencies across the state are improving the public’s quality of life by reducing mosquito populations in an environmentally sound manner.



Highlights

This year, the office intensified its collaboration with the New Jersey Department of Health (DOH) to start testing local mosquito populations for Chikungunya (a mosquito-borne virus recently imported to the Western hemisphere) and Dengue. While these arboviruses have not been found in New Jersey mosquito populations, proactive testing is the best way to protect public health and prevent the spread of disease. The office also continued to collaborate with the DOH, Rutgers University and county mosquito control agencies to monitor West Nile virus and Eastern Equine encephalitis, which have been present in the State for many years. Diligent surveillance efforts like these allow authorities to observe population trends across the Garden State and focus their efforts to reduce local mosquito populations.

The OMCC also expanded efforts to alter and improve the condition of wetland areas documented as mosquito production sites. Working closely with county mosquito control agencies and the DEP's Land Use Management Program, the office is working to add a range of control methods to reduce problem habitats while also ensuring that the activities are conducted in an environmentally sensitive manner.

The OMCC continued its partnership with the Division's Bureau of Freshwater Fisheries to raise and supply mosquito-eating fish species to county mosquito control agencies as a form of bio-control. These fish, when stocked at appropriate sites, are efficient predators of mosquito larvae and allow agencies to reduce populations on a long-term basis while reducing the use of larvicides in those areas. More than 120,000 fish were stocked in ten counties and the office continues to increase the number of counties utilizing this control method.

Office of Business Administration **Paulette Nelson, Assistant Director**

The Office of Business Administration is responsible for the Division's licensing, accounting, budgeting, purchasing and billing functions. This office has three primary elements: *Licenses and Revenue*, *Permits*, and *Budget and Procurement*. These three sections work together to provide fiscal services for the Division and its constituents.

FY 2014 ANNUAL REPORT

Description	Total
Revenue Generated	
Licenses/Permits	\$ 14,030,915.00
Federal Aid (Via federal tax on hunting and fishing equipment)	\$ 5,616,224.00
State and Tribal Wildlife Grants Program	\$ 1,035,270.00
Marine & Shellfish Licenses	\$ 623,243.00
Marine Federal Grants (Includes USFWS, NOAA and JEA Grants)	\$ 2,295,418.00
Waterfowl Stamp	\$ 69,882.00
ENSP (license plate and tax check-off)	\$ 326,648.00
Miscellaneous (Exotics, Sedge Island, Hooked on Fishing)	\$ 372,794.00
	\$ 24,370,394.00
Appropriations	
General Fund Appropriation - H & A	\$ 2,032,000.00
General Fund Appropriation - Marine	\$ 1,907,036.00
General Fund Appropriation - ENSP	\$ 304,116.00
	\$ 4,243,152.00
Appropriations/Transfers received from State	
	\$ 28,613,546.00
Total Resources	
	\$ 12,088,900.00
	\$ 5,875,947.00
	\$ (1,245,939.00)
	\$ 3,384,213.00
	\$ 1,139,767.00
	\$ 344,684.00
	\$ 3,222,018.00
	\$ 631,376.00
	\$ 1,880,417.00
	\$ 552,123.00
	\$ 642,310.23
	\$ 28,515,816.23
Total Expenses	
	\$ 97,729.77
	BALANCE:
	\$ 97,729.77