



Glenn Normandeau  
Executive Director

# New Hampshire Fish and Game Department

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September 1, 2015

Her Excellency, Governor Margaret Wood Hassan  
and the Honorable Council  
State House  
Concord, New Hampshire 03301

Dear Governor Hassan and the Honorable Council:

In accordance with RSA 206:9-a, the New Hampshire Fish and Game Department is pleased to present for your review and acceptance the Biennial Report for fiscal years 2014 and 2015.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "G. Normandeau".

Glenn Normandeau  
Executive Director





# Conserving New Hampshire's Fish & Wildlife

## FOR 150 YEARS



**BIENNIAL REPORT**  
Fiscal Years 2014-2015  
July 1, 2013 – June 30, 2015

Pursuant to RSA 206:9-a  
Submitted October 1, 2015

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# Conserving New Hampshire's Fish & Wildlife *FOR 150 YEARS*

New Hampshire Fish and Game Department  
BIENNIAL REPORT

Fiscal Years 2014-2015  
July 1, 2013 - June 30, 2015

Pursuant to RSA 206:9-a  
Submitted October 1, 2015

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Margaret Wood Hassan  
*Governor*

EXECUTIVE COUNCILORS

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*As of 6/30/15*



# New Hampshire Fish and Game Department

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June 30, 2015

Her Excellency, Governor Margaret Wood Hassan  
And the Honorable Council  
State House, 25 Capital Street  
Concord, NH 03301

Dear Governor Hassan and Honorable Members of the Council,

In accordance with RSA 206:9-a, I am pleased to submit the New Hampshire Fish and Game Department's Biennial Report for July 1, 2014 – June 30, 2015. The Department takes the lead role in conserving fish, wildlife, marine resources, and their habitats – keeping the state's wildlife and fish populations in a healthy balance while conserving our wild places. These natural resources enrich our quality of life and support New Hampshire's economy, generating more than half a billion dollars each year in economic activity related to hunting, fishing and wildlife watching.

During this biennium, the Fish and Game Department observed its 150th anniversary. Thanks to the work of this agency over the past century and a half, New Hampshire today enjoys healthy fish and wildlife populations, resources that contribute to a healthy economy and an enviable quality of life.

While this Department benefits all citizens, our core functions are still being funded by people buying hunting and fishing licenses. Responsibilities have increased, and the cost of doing business continues to go up, but our revenue does not. During this biennium, we have faced an unprecedented situation. In spite of significant reductions in personnel and other cutbacks, the Fish and Game Fund has been largely depleted. The State Legislature allowed us to fulfill our responsibilities by providing supplemental General Funds. In this way, the broader public is contributing to the operation of the Department.

Going forward, we are committed to redoubling our efforts to provide all the services the people of New Hampshire have come to expect of us, as well as finding a solution to our funding dilemma. With this in mind, we look forward to working with the Governor, the Legislature, and the public in ensuring the financial stability and sustainability of the New Hampshire Fish and Game Department.

We thank the Governor and Legislature for their support in working through these difficult times. We will continue to work wholeheartedly to connect the public to the great outdoors.

Respectfully submitted,

Glenn Normandeau  
Executive Director

# FEDERAL AID IN WILDLIFE AND SPORT FISH RESTORATION PROGRAM



*New Hampshire's hunters, anglers and wildlife watchers can thank WSFR's creators for starting a system that has protected our wildlife, our outdoors and our outdoor traditions through the years.*

## **KEEPING OUR WILDLIFE — AND OUR TRADITIONS — HEALTHY**

Purchases of fishing tackle, firearms, ammunition, archery equipment and motorboat fuels, along with license sales, help fund sport fish and wildlife restoration in New Hampshire. This provides opportunities for hunting, fishing and other wildlife-associated recreation.

### **Not so long ago...**

In the middle of the 19th century in New Hampshire, numbers of many wildlife species were dwindling or gone altogether because of unregulated hunting and loss of habitat. Conservation efforts of the time were few – and frequently misguided or scientifically questionable – but leadership was beginning to understand that investing in wildlife and habitat pays great dividends.

### **A unique solution**

The Pittman-Robertson Act, or Federal Aid in Wildlife Restoration Act, was passed in 1937. It was designed to counteract the wildlife crisis by providing local funding for wildlife management research; the selection, restoration, rehabilitation and improvement of wildlife habitat; and public use and benefit related to same.

In 1950, the Dingell-Johnson Act or Sport Fish Restoration Act was created to provide similar management, conservation and restoration improvements for fisheries. Together, the Wildlife and Sport Fish Restoration Programs (WSFR) have transformed the landscape and immeasurably improved the conditions and prospects for New Hampshire's wildlife. In short, both acts encourage a scientific approach toward managing – and restoring – fish and wildlife.

### **User-pay, user-benefit**

“Every time an American hunter buys a gun or ammunition he chips in to improve his sport,” said the author of a 10-year report on federal wildlife restoration released in 1949. It's just as true today: WSFR programs are funded by revenues collected from the manufacturers of sporting arms, handguns, ammunition and archery equipment, fishing rods, reels, lures and other fishing gear. Motorboat and small engine fuel taxes also help fund the system. The money is paid back to New Hampshire Fish and Game – and wildlife agencies in the other U.S. states and territories – to be used on specific wildlife restoration projects.

### **Meeting the public's wildlife needs**

With the support of WSFR, deer, salmon, wild turkeys and countless other creatures are now prospering in N.H. Fish and Game's scientific research and management give species a solid chance to re-establish healthy populations, while at the same time improving habitats for all to enjoy. Along the way, WSFR helps Fish and Game meet the public's need for wildlife resources by improving boating access, providing aquatic education and outreach, maintaining quality hunter education programs and myriad related projects.

New Hampshire's hunters, anglers and wildlife watchers – including tourists – can thank WSFR's creators for starting a system that has protected our wildlife, our outdoors and our outdoor traditions through the years.

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FISH AND GAME  
    REVENUE CHART ..... BACK COVER

## ORGANIZATION AND FUNCTION



### The mission of the New Hampshire Fish and Game Department:

As the guardian of the state's fish, wildlife and marine resources, the New Hampshire Fish and Game Department works in partnership with the public to:

- conserve, manage and protect those resources and their habitats;
- inform and educate the public about those resources; and
- to provide the public with opportunities to use and appreciate those resources.

The New Hampshire Fish and Game Department was established on June 30, 1865, as the Fisheries Commission. It was reorganized in its current format in 1935 in accordance with R.L. 240:1 (RSA 206:1), which states that: "There shall be a Fish and Game Department under a Commission to be known as the Fish and Game Commission."

### NEW HAMPSHIRE FISH AND GAME COMMISSION

Commission members are appointed by the Governor and Executive Council. There are 11 members, one from each county in the state, plus one representing the coastal area. No more than six commissioners can be members of the same political party. Commission members must be well informed on the subject of fish and wildlife. Their duty is to represent the citizens of New Hampshire and be the stewards of the fish, wildlife and marine resources of the State of New Hampshire and to set general policy for: conservation of wildlife; development, funding and implementation of a strategic plan for the operation of the Department; acquisition and development of public access to lands and waters; public education and building support for Department programs; and establishment of positions on proposed legislation that affects the Department and fish, wildlife and marine resources.

### OFFICE OF THE EXECUTIVE DIRECTOR

The Fish and Game Executive Director has the responsibility of supervision of employees and of all activities and functions of the New Hampshire Fish and Game Department and enforces all provisions of state laws relating to fish, wildlife and marine resources. The Executive Director is nominated by the Commission and appointed by the Governor and Executive Council. Each candidate must be a competent administrator and have knowledge of, and experience in, the requirements for the protection, conservation and restoration of the fish and wildlife resources of the state. The Executive Director serves a term of four years.

The Office of the Executive Director oversees budget development and oversight and coordination of federal aid, rules and legislation, environmental review and personnel administration. Within the Director's office, the Landowner Relations Program works in partnership with hunters, anglers and landowners to maintain access to private lands for hunting, fishing and other outdoor recreation. This program identifies issues and concerns that landowners face in keeping their properties open, and works proactively to address them. The Director's office also serves as the liaison with the nonprofit Wildlife Heritage Foundation of New Hampshire.

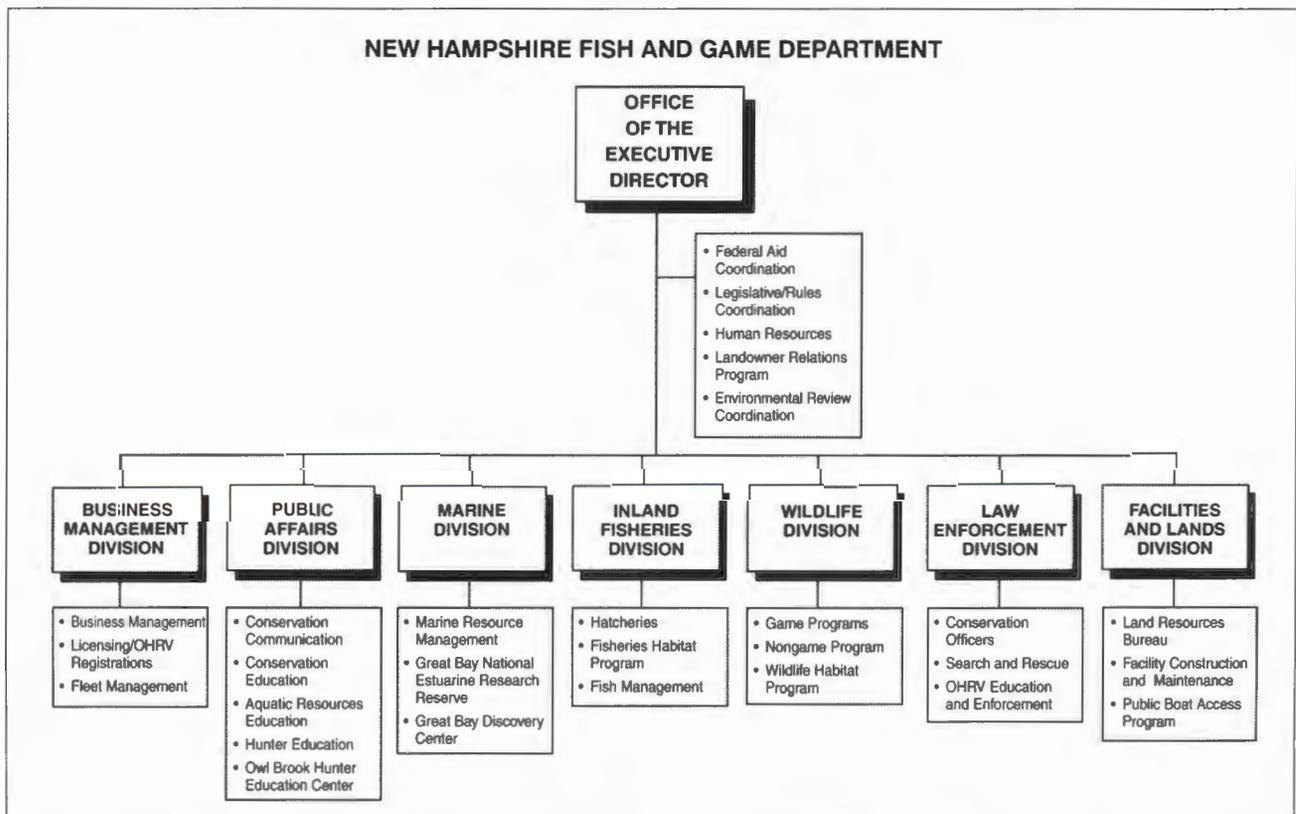
The Department's Human Resources (HR) staff provides administrative support to the office of the Executive Director and to the six divisions which comprise the Fish and Game Department. HR includes the Human Resources Administrator, the Human Resources Coordinator and a Payroll Officer. HR staff are responsible for the bi-weekly pay of approximately 185 full-time and 35 part-time/seasonal employees. They handle all workers compensation claims and assist employees in the claims process, as well as their return to work. HR staff assist employees with position reclassifications. They administer all Family and Medical Leave Act (FMLA) requests and work with employees and medical professionals in the confidential administration of FMLA leave.

## MAJOR DIVISIONS

The New Hampshire Fish and Game Department carries out its mission through the work of seven divisions: Business, Facilities and Lands, Inland Fisheries, Law Enforcement, Marine Fisheries, Public Affairs and Wildlife.

The **Business Division** facilitates all business functions for the Department, including preparation and submission of the biennial budget. It is responsible for issuing and collecting the revenue from the sale of fishing and hunting licenses and associated permits, as well as the processing of all accounts payable, accounts receivable, cash management, Federal and other grants, financial management, and inventory control. Division staff supervise the purchase of all equipment, materials and supplies and coordinate all contracts. The Business Division also oversees fleet management and manages the Off-Highway Recreational Vehicle registration program. Division staff interact daily with other state agencies and provide all shipping and receiving functions, mail and courier duties for the Department.

The **Facilities and Lands Division** is responsible for the management and maintenance of all Fish and Game properties statewide, including over 160 buildings, 142 boat ramps, 130 dams, 7 fish ladders and over 74,541 acres of wildlife management areas, conservation easements, and other interests. The Division also provides the design and construction of boating access facilities, fabrication of information kiosks and portable sanitary facilities. The Lands side of the division negotiates land and habitat acquisitions, and manages conservation easement areas and land use requests through Special Use Permits.



## ORGANIZATION AND FUNCTION

**The Inland Fisheries Division** is responsible for all freshwater fish within both the state and interstate waters. Fisheries biologists and fish culturists work to protect and restore fish resources and aquatic habitat and to provide New Hampshire anglers with diverse fishing opportunities. This Division is responsible for operating Fish and Game's six fish hatcheries, which during the biennium produced nearly one million fish each year to meet a variety of the Division's management programs.

**The Law Enforcement Division** is primarily responsible for enforcement of all laws and rules pertaining to fish, wildlife and marine resources. Conservation Officers also have the authority to enforce motor vehicle and criminal laws. These officers prosecute all of their own cases involving offenders and violators of these laws and rules. They have the statutory mandate to conduct all search and rescue operations in the woodlands and waterways within the state. The New Hampshire Fish and Game Department is responsible for the enforcement of all snowmobile and off highway recreational vehicles (OHRV) and all-terrain vehicles (ATV) as well as the safety education and training programs. The Law Enforcement Division serves as the primary liaison to the Department of Safety Homeland Security and Emergency Management Agencies.

**The Marine Fisheries Division** manages resident and migratory estuarine and saltwater species, including fish, lobsters, clams and oysters. The Division also manages the Great Bay Estuarine Research Reserve and the Great Bay Discovery Center. Its staff works closely with other states and federal agencies to protect and maintain marine resources and their habitats for both commercial and recreational fisheries as well as resident and migratory species frequenting New Hampshire's coast and estuaries.

**The Public Affairs Division** informs and educates, building public support for conservation and the Department's mission and encouraging participation in hunting, angling and other outdoor activities. The Division provides information through its website and a wide variety of publications, including *New Hampshire Wildlife Journal* magazine, as well as television and radio programs, online videos, social media, advertising, exhibits, media relations, shows/events and marketing. Its educational programs include: hunter and trapper education; Let's Go Fishing and watershed education; wildlife education and teacher training; and a variety of workshops for the public, such as hunting and fishing talks, hands-on workshops for hunters and anglers, and Becoming an Outdoors-Woman programs.

**The Wildlife Division** manages, maintains, protects, and conserves the state's game and nongame wildlife resources and their habitats. Game populations are managed at healthy, sustainable levels consistent with available habitat and diverse public interests. Nongame species are managed to keep common species common and to secure the sustained presence of threatened and endangered species. Habitat programs are designed to conserve, protect, restore and manage diverse wildlife habitats including critical habitats for game and nongame species, and to provide technical guidance to municipalities and private landowners, including commercial forest interests, interested in doing the same. Wildlife biologists conduct surveys and analyze harvest data to assess

# ORGANIZATION AND FUNCTION

and monitor populations and conduct research to better inform management decisions. Biologists promulgate harvest regulations for game and furbearer species to achieve diverse public interests and to maintain healthy populations. Biologists also provide technical assistance to local, regional and statewide planning boards to protect and enhance wildlife populations and habitats and to minimize development impacts on wildlife species at risk. Biologists work in partnership with the U.S. Department of Agriculture Wildlife Services staff to prevent and/or mitigate wildlife damage to orchards, other agricultural lands and private property and to ensure public safety.

PERSONNEL DATA		
<u>Current Number of Employees</u>	<u>6/30/14</u>	<u>6/30/15</u>
Unclassified	1	1
Classified	188	188
Temporary*	<u>0</u>	<u>0</u>
Total	189	189

\*Permanent employees are those occupying positions permanently established by the Legislature, whereas temporary employees are those whose service is authorized for a limited or intermittent period.

PHYSICAL PLANT AND PROPERTY APPRAISAL		
	<u>6/30/14</u>	<u>6/30/15</u>
Equipment	11,192,455	11,332,227
Physical Plant	106,105,842	106,791,367
Farm	0	0
Highway	<u>0</u>	<u>0</u>
TOTAL	\$117,298,297	\$118,123,594
<b>RECEIPTS</b>		
General Funds	749,000	940,598
Federal Funds	7,112,906	8,467,675
Agency Income	7,513,366	8,085,402
Fish and Game Funds	<u>12,128,018</u>	<u>12,052,120</u>
TOTAL	\$27,503,290	\$29,545,795
<b>EXPENDITURES</b>		
Permanent Personnel	9,603,017	9,821,247
Current Expenses	1,882,748	1,940,951
Heat, Electricity and Water	377,494	365,011
Transfers to OIT	591,552	650,287
Equipment New/Replacement	544,878	711,898
Transfers to other agencies	4,345,350	4,519,734
Other Personnel Services (Seas and PT)	390,115	467,448
Benefits	5,636,486	5,496,425
Retirement, Pension and Health Insurance	831,514	819,816
Promotional and Marketing Expense	158,070	165,501
In-State Travel	390,881	395,231
Grants-Federal and Non Federal	82,556	1,064,437
Out-of State Travel	39,453	46,800
Contracts for Services	270,146	284,558
Interagency Payments	1,012,361	1,095,253
Research and Management	942,627	959,322
Habitat Acquisition and Management	<u>404,042</u>	<u>741,876</u>
TOTAL	\$27,503,290	\$29,545,795
Undesignated Fish and Game Fund Balance	\$2,186,876	\$1,740,547*

\*Preliminary/Unaudited

### Statement of Sales or Exchanges

Promotional expenditures related to licenses:

During the biennium, 12 nonresident honorary licenses were issued in 2013, and 14 were issued in 2014.

# MAJOR ACCOMPLISHMENTS

## BUSINESS DIVISION

- Equipped license agents with point-of-sale service technology, replacing cumbersome monthly data reporting with an instantaneous data stream. This move saved on printing and data entry personnel costs.
- Successfully moved OHRV registrations online, with point-of-sale capabilities for agents.
- Hired a part-time mechanic to assist our full-time mechanic, reducing the cost of outsourcing regular vehicle maintenance and service.
- Managed the complex finances of the agency.

## EXECUTIVE DIRECTOR'S OFFICE

- Human Resources staff provided administrative support to the office of the Executive Director and to the six divisions comprising the Department.
- Fish and Game's Environmental Review Coordinator coordinated complex environmental reviews involving various divisions of the Department.
- Administered 83 separate federal assistance grants and cooperative agreements totaling approximately \$16 million in federal assistance to the Department.
- Actively recruited landowners for the Operation Land Share Program, bringing the total number of private land acres enrolled in the program and open for public access to over 400,000 acres. These lands are generously left open and un-posted by private landowners for the enjoyment of the public for hunting, fishing, and wildlife watching.
- Provided private landowners who keep their lands open for public access with free signage and assistance with mitigating issues related to leaving their lands open. Made them aware of opportunities to partner with the Department and other organizations to improve habitat management and public access to their lands.

*The Wildlife Heritage Foundation of N.H., provided significant private funds, with over \$165,575 in grant money awarded to support Fish and Game programs.*



**WILDLIFE HERITAGE  
FOUNDATION of NH**

SHAPING THE PAST, SHAPING THE FUTURE.

## WILDLIFE HERITAGE FOUNDATION OF NEW HAMPSHIRE

- The Wildlife Heritage Foundation of New Hampshire, Fish and Game's non-profit partner, provided significant private support to the Department, with over \$165,575 in grant money awarded to support 23 Fish and Game programs, including an additional \$54,703 of donor-restricted funds for Barry Camp and K-9 Search and Rescue Program.

## FACILITIES AND LANDS DIVISION

- Refurbished the N.H. Department of Environmental Services-owned boat access to Great Pond in Kingston.
- Constructed a formal boat access at the Stinson Lake, Road To Public Waters site in Rumney.
- Extended the existing concrete plank ramp at the Baxter Lake boat access

## MAJOR ACCOMPLISHMENTS

facility in Rochester deeper into the lake to mitigate damage caused by “power loading” boats onto trailers.

- Assisted the Department of Resources and Economic Development with a boat access reconstruction project in Otter Lake, Greenfield.
- Assisted the Public Affairs Division in erecting a pavilion at the Owl Brook Hunter Education Center for shotgun instruction and practice.
- Made improvements to the foundation drainage system to the Depot House, a 150-year-old railroad station being used as offices at the Great Bay Discovery Center in Greenland.
- The Department’s commitment to energy improvements was recognized by Governor Hassen, who presented three individuals at Fish and Game with Excellence in Energy Efficiency Awards at the 2014 Annual State Energy Conference.
- Received Energy Project of the Month recognition for improvements to the garage lights.
- Replaced five rooftop air conditioning units with high efficiency equipment with 8% of project cost provided by a utility company rebate, and 83% of cost through an Energy Management Office grant.
- The high-pressure sodium parking lot lights at headquarters were replaced with LED lights, reducing power consumption by an incredible 87%.
- Renovated the Facilities and Lands office to address safety issues. A new flat filing system will allow the division to properly store and retrieve our large-format plans.
- Installed a septic and leach field system and made internal plumbing improvements at a building used by the Law Enforcement Division for Conservation Officer Trainees.
- Acquired the 200+ acre Conner Farm Wildlife Management Area (WMA) in Exeter from the N.H. Department of Transportation.
- Coordinated the transfer of ownership of a maintenance shed from the N.H. Department of Transportation to Fish and Game’s Law Enforcement Division.

### INLAND FISHERIES DIVISION

#### **Fish Culture**

- The six Fish and Game hatchery facilities produced and distributed fish for trout and salmon stocking programs throughout the state. They distributed 1.41 million fish in FY 2014.



#### **FEDERAL AID**

The Executive Director’s Office also coordinates the Department’s participation in various federal assistance programs. Activities include pre-award coordination and proposal review, application submission, post award grant management and compliance, as well as certain aspects of fiscal management and budgeting. Federal funds received through these programs are critical to accomplishing the Department’s mission. Federal revenue received as reimbursement for approved grant costs accounts for about 30% of total Department revenue.

**During the biennium, Fish and Game administered 83 separate federal assistance grants and cooperative agreements totaling approximately \$16 million in federal assistance to the Department.** These funds were awarded from three Departments of the Federal government through 12 different funding programs. The primary sources of federal dollars to N.H. Fish and Game were the Department of the Interior through the Fish and Wildlife Service; the Department of Commerce through the National Oceanic and Atmospheric Administration; and the Department of Agriculture, through the Natural Resources Conservation Service. The formula based apportionments under the Wildlife Restoration and Sport Fish Restoration Acts provide over two-thirds of all federal funding received by the Department.

Federal funds received during the biennium helped N.H. Fish and Game accomplish approved activities and reimbursed costs associated with a wide range of program functions, such as fish and wildlife inventories, marine and coastal programs, fish hatchery operation, construction and maintenance of boat access facilities, education programs, wildlife disease monitoring, habitat improvement and management, land acquisition, and law enforcement.

## MAJOR ACCOMPLISHMENTS

### **Large Lakes Program**

- Conducted annual fall trap-netting surveys to monitor landlocked salmon size and age-class characteristics at Big Squam, Sunapee, and Winnepesaukee lakes.
- Conducted fall gill-netting surveys to monitor lake trout spawning stock size characteristics at Newfound, Nubanusit and Winnisquam lakes.
- Conducted hydro-acoustic and trawl netting surveys to monitor pelagic forage fish species (primarily rainbow smelt), size characteristics, spatial distribution and density at Big Squam, Newfound, Sunapee, Winnepesaukee, and Winnisquam lakes.
- Conducted dip-netting surveys to monitor spawning rainbow smelt presence, size, and age characteristics in tributaries to Cedar, Christine, Newfound, Pleasant (New London), Sunapee, and Winnepesaukee lakes.
- Stocked landlocked salmon yearlings.
- Aerially stocked remote ponds with brook trout fingerlings by helicopter.

### **Coldwater Fisheries Program**

- As a partner in a fifteen-state effort to implement the Eastern Brook Trout Joint Venture's conservation action plan, 122 stream sites were surveyed in New Hampshire; 94 of these sites were found to have self-sustaining populations of brook trout.
- The Clean Water/Healthy Trout Project began in the Ammonoosuc River watershed of northern New Hampshire in the summer of 2014. This initiative assesses the habitat suitability of local streams to support brook trout, as well as other aquatic species.

### **Fisheries Habitat**

- In the Nash Stream watershed, replaced an impassable culvert and conducted restoration activities on 4.5 miles of Nash Stream.
- In the Connecticut Lakes Natural Area, two undersized culverts were removed and replaced with bridges and three other culverts on perennial streams were removed and the road retired.
- Provided technical assistance to Trout Unlimited for instream wood restoration projects in southern New Hampshire.
- The Fisheries Habitat Account provided funding for the newly reconstructed Jones Pond Dam located within the Ellis Hatch Wildlife Management Area.

### **Fish Conservation Program**

- Collected fish data for a number of projects and partners, including the US Fish and Wildlife Service, the US Forest Service, N.H. Department of Environmental services, and Trout Unlimited. Data from over 483 surveys was compiled into a statewide fish database.
- Bridle shiner (state threatened) distribution surveys were performed.
- Established index sites for monitoring American eel population trends in the Merrimack River watershed.

### **Warmwater Fisheries Program**

- Conducted a radio telemetry study on the Squam Lakes to examine largemouth and smallmouth bass movement after bass tournament weigh-in.

*As a partner in a fifteen-state effort to implement the Eastern Brook Trout Joint Venture's conservation action plan, 122 stream sites were surveyed in New Hampshire; 94 of these sites were found to have self-sustaining populations of brook trout.*

## LAW ENFORCEMENT DIVISION

- Conservation Officers coordinated nearly 400 Search and Rescue Missions involving hikers, climbers, snowmobilers, children, elderly people, and the recovery of victims who drowned on New Hampshire's lakes and rivers.
- Voluntary Hike Safe Cards became available for the first time in January of 2015, at a cost of \$25 per person and \$35 per family.
- Law Enforcement now has three trained and certified Conservation Officer K-9 Teams capable of assisting with search and rescue operations, evidence recovery for criminal investigations and tracking suspects or lost victims.
- The Department's Operation Game Thief Program went through some significant changes, including new public relations and outreach initiatives to enhance awareness and encourage citizens to report wildlife crimes. A grant from the Wildlife Heritage Foundation of New Hampshire funded the purchase of a trailer to be used as an interactive display at shows and events to promote Operation Game Thief.
- Through a change in the law made by the New Hampshire Legislature, Conservation Officers now have the authority to enforce Motor Vehicle Laws. This new authority will allow Conservation Officers to become more effective in their role as Public Safety Officers.
- Conservation Officers continue to play a very active role on New Hampshire's coastal shoreline. Under the guidelines of the Seacoast Joint Enforcement Agreement, they work in close partnership with the National Marine Fisheries Service, Atlantic States Marine Fisheries Council and National Oceanographic and Atmospheric Administration to enforce both state and federal laws related to seacoast commercial fishing, fisheries management and recreational activities along the New Hampshire coastline.
- The administrative staff worked with the Executive Director's Office to adopt administrative rules to address advances in technologies that negate the principles of fair chase, including a ban on the use of drones and computer-controlled smart rifles for the taking of wildlife.
- The Fish and Game Law Enforcement Dive Team conducted 13 dive recovery missions for drowning victims during the biennium. A new dive boat was purchased with funding supplied by the Wildlife Heritage Foundation of New Hampshire.

*Conservation Officers coordinated nearly 400 Search and Rescue Missions involving hikers, climbers, snowmobilers, children, elderly people, and the recovery of victims who drowned on New Hampshire's lakes and rivers.*

## MARINE DIVISION

### **Management and Resource Monitoring**

- Worked with federal and state partners via the New England Fishery Management Council and Atlantic States Marine Fisheries Commission to manage 62 marine species. This included modifications to fisheries management plans for striped bass, lobsters, herring, groundfish, American eels, menhaden and habitat.
- Operated and monitored fish ladders on six coastal rivers to provide access to freshwater spawning habitat for more than 260,000 diadromous fish.

## MAJOR ACCOMPLISHMENTS

*The Marine Fisheries Division worked with fishing industry to develop a plan to distribute \$2,046,400 in federal fisheries disaster assistance to N.H.'s groundfish fishing industry.*

- Conducted research and tagging studies of egg bearing female lobster and river herring movement.
- Worked with fishing industry to develop a spending plan and distribute \$2,046,400 in federal fisheries disaster assistance to N.H.'s groundfish fishing industry.
- Continued annual monitoring programs that collect abundance and biological data on numerous species of marine organisms found in N.H.'s tidal waters.
- Monitored the catch and harvest of N.H.'s commercial and recreational fisheries in tidal waters.

### **Great Bay National Estuarine Research Reserve**

- Passed the 50,000 mark for number of school children educated at the Great Bay Discovery Center.
- Over 9,000 visitors came to the exhibit room at the Great Bay Discovery Center in 2013 and 2014.
- Held Climate Summit III in April of 2014. This event communicated local climate science and action to end users and stakeholders, helped build collaborative teams for future work, and identified local climate science and action needs.
- Completed a model of how salt marsh and other coastal habitats will change under different sea level rise scenarios (sea level affecting marsh migration model).
- Completed detailed baseline habitat maps for all properties within the Great Bay National Estuarine Research Reserve.
- Implemented monitoring indicators useful to assessing and tracking the health of Great Bay, including:
  - Saltmarsh vegetation surveys;
  - A macro algae survey;
  - Piloted a new "attached algae" tool to monitor the types of algae living in tributaries to Great Bay; and
  - Piloted invasive crab monitoring techniques that will be expanded upon and refined to understand how crab populations are changing in Great Bay.

## **PUBLIC AFFAIRS DIVISION**

### **Information Unit**

- Redesigned the Fish and Game Department's website, which serves an average of 75,000 unique visitors each month, to make it easier to use and mobile-friendly.
- Developed a dynamic marketing and promotion fishing campaign titled "Catch Your NH Monster!"
- Coordinated 21 "Outdoor Adventure Talks" promoting participation in outdoor recreation and two Discover WILD New Hampshire Day events, reaching 11,055 participants.

## MAJOR ACCOMPLISHMENTS

- Developed outreach campaigns pertaining to the N.H. Fish and Game Department's funding situation and promoting the new Hike Safe Card.
- Coordinated the Department's social media outreach, with more than 32,000 people "liking" Fish and Game on Facebook at the close of the biennium. Launched a presence on Pinterest.
- Earned national honors from the Association for Conservation Information for the N.H. Wildlife Calendar, *N.H. Wildlife Journal* magazine, Discover Wild Times for Kids, and various video programs.
- Worked with Parks By Nature, LLC, to develop a mobile application allowing outdoor users to buy licenses and find fishing, hunting and wildlife information using maps and information on their mobile devices. The application will be available in FY2016.
- Spearheaded the Department's observation of its 150th anniversary.
- Worked with the Northeast Association of Fish and Wildlife Agencies to develop a website helping the public resolve nuisance wildlife problems.
- Managed the facility at Barry Conservation Camp, which served more than 430 youth during the biennium.

### **Conservation Education Programs**

- Over 600 trained volunteer teachers, certified instructors and Wildlife Stewards helped deliver courses and presentations throughout the state, delivering certification programs and wildlife conservation education to the public. Those volunteer hours provided in-kind match for \$1.6 million of federal funds to support education programs.
- Ran 289 Hunter and Bowhunter Education courses, certifying 8,001 hunters. More than 700 people were certified for trapping through 24 mandatory Trapper Education courses.
- Over 4,200 people attended workshops, courses and events at Owl Brook Hunter Education Center.
- Reached approximately 20,000 people through 136 Let's Go Fishing courses and 25 events.
- Served over 100 schools, 80 teachers, and 2,400 students in every major watershed of the state through the Watershed Education Program.
- During the biennium, 530 women attended BOW and Beyond BOW workshops.
- In conjunction with the Math Science Partnership, trained 60 teachers from multiple school districts on conservation education strategies, Project WILD and Project HOME.
- Growing Up WILD provided nine workshops for 170 teachers.
- Convened a statewide working group involving a wide range of partner organizations to raise awareness among anglers on fishing with lead-free tackle.
- Provided training sessions to key Department staff on tactics pertaining to Recruitment, Reactivation and Retention of hunters and anglers.
- Worked on needs assessment and evaluation to begin development of next 5-year plan for Hunter Education and Aquatic Resources Education.



*The Public Affairs Division spearheaded the Department's observation of its 150th anniversary.*

*Conservation Education Programs coordinated volunteer time qualifying for an in-kind match that brought in over \$1.6 million of Wildlife and Sportfish Restoration funds to support education programs.*

# MAJOR ACCOMPLISHMENTS

## WILDLIFE DIVISION

### Game Programs

- The Department's Game Management Team used current biological data and significant public input to establish a new 10-year game management plan, with revised population goals and objectives for the state's game species, including deer, bear, moose and turkey.
- During the 2013 and 2014 deer seasons, 828 deer tissue samples were collected for testing for Chronic Wasting Disease in our deer population. All tests have been negative since monitoring began in 2002.
- Fish and Game continued to improve bear management data collection, analysis and population modeling techniques while simultaneously achieving regional bear population goals.
- In conjunction with USDA Wildlife Services, the division continued to implement a statewide bear conflict mitigation program.
- During the biennium, the moose population in two moose management regions increased slightly, was stable in one, and decreased by varying degrees in three. While permit issuance has decreased, moose hunter success in 2013 and 2014 remained relatively stable at 68%.
- An important moose mortality and productivity study was initiated in the winter of 2014 and continued through the biennium. The study focus is primarily on the ecology and impacts of winter ticks on moose survival and reproduction in northern New Hampshire.
- The division's statewide turkey population goal of 30,000 wild turkeys was surpassed during the biennium, with an estimate of 40,000. Carrying capacity for turkeys in the state has now been reached, with some turkeys in every town and an annual spring harvest of 4,000.
- Two viruses that have been present in the New Hampshire wild turkey population since 2011 were monitored over the biennium. Losses due to the viruses were minimal.
- The division's small game project continued to improve small game data collection, assess user interest and preferences, and quantify hunter observations and activities through several ongoing hunter surveys.
- The number of pheasant stocking sites (73) remained constant over the biennium. More than 5,000 hunters pursued over 12,000 stocked pheasants per year.
- Biologists captured and leg-banded 1,547 resident Canada geese and 1,351 ducks throughout the state as part of ongoing regional waterfowl monitoring efforts.
- To date, the Great Bay Resource Protection Partnership has successfully protected nearly 10,000 acres of waterfowl habitat.
- Trapping continued to play a significant role in the management of New Hampshire's furbearers.

*An important moose mortality and productivity study, funded with Wildlife and Sportfish Restoration funding matched by UNH, was initiated in the North Country during the winter of 2014.*



## MAJOR ACCOMPLISHMENTS

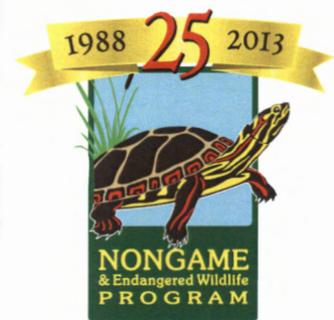
- A bobcat research project, conducted in partnership with the University of New Hampshire, came to a close during the biennium. Bobcats were found to use a wide array of habitats and the statewide bobcat population was estimated at from 1,400 to 2,200 animals.

### **Animal Damage Control**

- New Hampshire's Fish and Game/Wildlife Services animal damage control partnership responded to more than 3,700 requests for animal damage assistance, including 289 site visits, and distributed 3,355 information leaflets.

### **Nongame and Endangered Wildlife**

- Observed the 25th Anniversary of the Nongame and Endangered Wildlife Program with an awards ceremony to recognize the people who have helped make the program successful in its continuing efforts to restore endangered wildlife and protect wildlife diversity.
- Began the process, in concert with partners statewide, of updating New Hampshire's Wildlife Action Plan to set priorities for the next ten years. The comprehensive process involved assessment of species and a series of public input meetings with stakeholders.
- Released 26 captive-bred New England cottontail rabbits back to the wild and restored more than 750 acres of habitat in support of the range-wide recovery of this state-endangered species.
- Completed a five-state research, monitoring, and conservation planning effort to secure a more certain future for the state-endangered Blanding's turtle.
- Continued captive-rearing and releases of Karner blue butterflies to supplement the growing wild population. In 2014, 971 Karner blue butterflies were released in the Concord Pine Barrens and 2,600 eggs were collected for rearing and stocking in 2015.
- Protected upland sandpiper nests by working with airport operations and maintenance staff at Pease International Airport. In July and August of the 2014 season, surveys verified that 11 fledglings had survived and were ready to attempt their first migration to wintering habitats in South America.
- Monitored pine marten, a state-threatened species that lives in spruce-fir forests in northern New Hampshire, to help determine what habitats marten are using and areas that connect the highest-quality habitats.
- Protected 460 acres of high priority habitat in Hooksett, which includes extensive hemlock-hardwood-pine forest, an exemplary Appalachian oak-pine forest, combined with over 76 acres of wetlands, 43 vernal pools and three perennial streams.
- Collaborated with 35 towns to protect or enhance wildlife habitat by developing natural resource inventories, conservation plans, town forest management plans and/or engaging citizens in local conservation as part of the Taking Action for Wildlife program conducted in conjunction with UNH Cooperative Extension.



*The Nongame and Endangered Wildlife Program celebrated its 25th Anniversary in 2013.*

## MAJOR ACCOMPLISHMENTS

*Twelve information kiosks were installed at ten Wildlife Management Areas, three parking areas were built and over 40 WMA maps were updated.*

### **Habitat Management Programs**

- Regional biologists reviewed 39 habitat improvement projects on private lands in 34 towns, including nine of New Hampshire's ten counties.
- Reviewed a total of 113 timber harvests on 32 large ownerships in northern New Hampshire.
- Assisted National Wildlife Refuge planners and managers with the development of Refuge Comprehensive Conservation Plans (CCP) for the Silvio Conte National Fish and Wildlife Refuge and the Great Bay National Wildlife Refuge.
- Wildlife Management Areas (WMAs) were actively managed to enhance wildlife food and cover with timber harvests at eight WMAs, generating nearly \$275,000 in revenue; mowed fields at 33 state properties to maintain 243 acres for wild turkey, deer, grassland birds and other wildlife; completed more than 20 acres of plantings; replaced four undersized culverts with bridges to deter erosion and improve stream connectivity for aquatic wildlife, including brook trout; and renewed agricultural agreements on four WMAs.
- To facilitate public use of WMAs, installed twelve visitor information kiosks at ten WMAs, built and installed 21 WMA signs, built three parking areas, and added descriptions and maps of over 40 WMAs to the Department's online guide.
- Provided technical assistance to 38 municipal and private landowners on habitat management issues affecting over 5,000 acres of land, and held 21 workshops that reached nearly 500 natural resource professionals, landowners and community leaders.
- Helped fund the training of 43 New Hampshire Coverts Project volunteers over the biennium; they join 329 existing Coverts volunteers, who actively help conserve wildlife habitat in their communities.

## 2014 SESSION

Enacted Law:

- **HB 256 Title: relative to establishing a voluntary hike safe card for fish and game search and rescue operations, relative to deputy fish and game conservation officers, and relative to the commission on sustainability of the fish and game department.** This bill: 1) established a voluntary hike safe card issued by the fish and game department for the purpose of funding search and rescue response operations; 2) removed the requirement that deputy conservation officers of the fish and game department serve 8 hours per month without compensation; and 3) reestablished the commission to study opportunities and options to improve the sustainability of the fish and game department. **Chapter 230. Section 1 Effective Date 1/1/2015; Section 4 Effective 11/1/2014; Remainder Effective 7/21/2014.**
- **HB 1290 Title: allowing nonresident full-time students to purchase licenses for hunting and fishing.** This bill provides that nonresident full-time students at a public or private high school, postgraduate program, or postsecondary educational institution in this state may purchase a hunting and fishing license at the fee charged to residents for the license. **Chapter 96; Effective 8/10/2014.**
- **HB 1579 Title: relative to penalties for violations of trapping laws and relative to education requirements for issuance of a trapping license.** This bill adds penalties for violations of trapping laws and rules which result in the death of a domestic animal. The bill requires trapping education for license applicants who have not held a trapping license in this state during any of the previous 3 years. **Chapter 155. Effective 1/1/2015.**
- **SB 230 Title: relative to the definition of utility terrain vehicles.** The bill adds a definition of a utility terrain vehicle used as an off highway recreational vehicle. **Chapter 281. Effective 9/26/2014.**
- **SB 231 Title: relative to regulation of tractors and utility vehicles.** This bill modifies the definition of tractor and the equipment and operation requirements for utility vehicles. **Chapter 282. Effective 7/28/2014.**
- **SB 232 Title: relative to speed limits for off highway recreational vehicles and snowmobiles.** This bill changes the speed limits for OHRVs and snowmobiles on roads and adjacent rights of way, and lowers the speed limit for OHRVs on trails, unless posted otherwise. **Chapter 283. Effective 7/28/2014.**
- **SB 240 Title: relative to authorizing temporary registrations of off-highway recreational vehicles for nonresidents.** This bill allows nonresidents to be issued temporary registrations for OHRVs for 10 consecutive day periods during the period of May through October. **The temporary OHRV registration authority is repealed January 1, 2018. Chapter 286. Section 4-6 Effective 1/01/2018; Remainder Effective 1/1/2015.**
- **SB 266 Title: relative to membership on the exotic aquatic weeds and species committee.** This bill adds members to the exotic aquatic weeds and species committee. **Chapter 0133; Effective 6/16/2014.**
- **SB 311 Title: authorizing the executive director of the fish and game department to execute an agreement allowing reciprocal snowmobile riding privileges with the states of Vermont and Maine.** This bill authorizes the executive director of the fish and game department to execute a regional endorsement agreement

*HB 256 established a voluntary Hike Safe Card for the purpose of funding search and rescue response operations*

*HB 1290 allowed nonresident full-time students to purchase hunting and fishing licenses at resident rates.*

## LEGISLATION

*SB 400 toughened penalties for violating rules related to the taking of American eels.*

allowing reciprocal snowmobile riding privileges with the states of Vermont and Maine. **Chapter 0246; Effective 9/19/2014.**

- **SB 389 Title: relative to the enforcement of motor vehicle laws by officers of the fish and game department.** This bill allows the fish and game officers to enforce the motor vehicle laws. **Chapter 0249; Effective 9/19/2014.**
- **SB 400-FN Title: relative to the penalty for violations of the taking of American eels.** This bill adds a penalty for the violation of law or rule on the taking of American eels. **Chapter 0210; Effective 1/1/2015.**

### Other Bills tracked:

- **HB 258 Title: prohibiting the taking of deer from baited areas.** This bill prohibits the practice of baiting for the taking of deer, and also prohibits feeding deer during deer season with foods known to be attractive to deer. The bill allows the executive director to issue special permits using baiting. **Inexpedient to Legislate.**
- **HB 1100 Title: relative to the acceptance of risk in outdoor recreational activities.** This bill provides that persons who engage in outdoor recreational activities accept the dangers inherent in such activities and shall not maintain a legal action against an owner for resulting injuries. **Interim Study.**
- **HB 1495 Title: repealing the prohibition on the use of silencing devices for taking wildlife.** This bill repeals provisions which prohibit the use of silencing devices for taking wildlife and imposes penalties therefor. **Inexpedient to Legislate.**
- **SB 287-FN Title: transferring a sum from the prepaid fish and game license account.** This bill requires the state treasurer to transfer up to \$500,000 from the prepaid fish and game license account to the fish and game fund for a shortfall in fish and game funding. **Interim Study.**
- **SB 336-FN Title: prohibiting the taking of deer from baited areas on state-owned lands.** This bill prohibits baiting for deer on state-owned lands, and also prohibits feeding deer within state-owned land during deer season with foods known to be attractive to deer. The bill allows the executive director to issue special permits allowing baiting. **Inexpedient to Legislate.**
- **SB407 Title: relative to wolf hybrids.** This bill prohibits the acquisition of wolf hybrids beginning January 1, 2015. **Interim Study Report: Recommended For Future Legislation**

## 2015 SESSION

### Laws Passed:

- **HB 212 Title: relative to revocation of fish and game licenses of persons convicted of sexual assault while hunting, trapping, or fishing and relative to the authority of the fish and game department to establish fees.** This bill: 1) Requires a minimum period of revocation or suspension of a license issued by the fish and game department for a person convicted of sexual assault while hunting, trapping, or fishing; 2) **Establishes the authority of the fish and game department to set the fees under RSA 541-A for licenses and permit issued by the department;** 3) Establishes the fish and game department environmental review fee. **Chapter 186; Section 1 Effective Date 1/1/2016, Remainder Effective 7/1/2015.**

*HB 212 gave N.H. Fish and Game the authority to set license fees.*

- **HB 281 Title: defining “exotic aquatic species of wildlife” and relative to the duties of the exotic aquatic weeds and species committee.** This bill defines exotic aquatic species of wildlife and adds to the duties of the exotic aquatic weeds and species committee. **Chapter 164; Effective Date 8/25/2015.**
- **HB 290 Title: relative to the acceptance of risk in outdoor recreational activities.** This bill provides that persons who engage in outdoor recreational activities accept the dangers inherent in such activities and shall not maintain a legal action against an owner for resulting injuries. **Chapter 165; Effective Date 1/1/2016.**
- **HB 336 Title: relative to seasons for hunting by crossbow.** This bill allows the executive director of fish and game to adopt rules for taking black bear by crossbow and for taking game animals and game birds during the regular firearms season for the species. **Chapter 123; Effective Date 8/7/2015.**
- **HB354 Title: relative to the closing of clam, oyster, and other bivalve areas for restoration.** This bill allows the executive director of fish and game, after a hearing, to close a clam, oyster, or other bivalve area for the purpose of restoration of the area for a period of not more than five years. **Chapter 110; Effective Date 8/7/2015.**
- **HB 464 Title: establishing the traditional commercial and recreational fishing protection act, prohibiting political subdivisions from interfering with commercial and recreational operations, relative to protective well radii for sewage disposal systems of commercial buildings, and relative to rulemaking by the commissioner of environmental services on certain minimal impact projects.** This bill establishes the commercial and recreational fishing protection act, which prohibits local governments from adopting ordinances declaring commercial or recreational fishing operations to be nuisances or which unreasonably burden or force the closure of such operations. The bill establishes criteria and exceptions for protective well radii for sewage disposal systems of commercial buildings. This bill also provides for rulemaking by the commissioner of environmental services to implement permit by notification for certain minimal impact projects. **Chapter 236; Effective Date 9/11/2015.**
- **HB 467 Title: relative to the 14-month registration of off highway recreational vehicles. This bill allows the fish and game department to issue 14-month OHRV registrations.** Current law allows the 14-month registration only on the initial registration. **Chapter 02; Effective Date 4/15/2015.**
- **SB 38 Title: establishing a commission to develop a land conservation plan.** This bill establishes a commission to develop a land conservation plan. **Chapter 0174; Section 2 Effective 12/31/2016, Remainder Effective 6/26/2015.**
- **SB 70 Title: relative to the processing of lobster tails.** This bill allows the processing of uncooked shell-on lobster tails for sale in New Hampshire. **Chapter 0101; Effective 1/1/2016.**
- **SB 148 Title: relative to the shellfish inspection program.** This bill makes certain changes in the shellfish inspection program to conform to federal law. **Chapter 0103; Effective 1/1/2016.**
- **SB 168 Title: relative to the duties of the commissioner of the department of environmental services.** This bill requires the commissioner of the department of environmental services, jointly with the executive director of the fish and game

*HB 290 provided that persons who engage in outdoor recreational activities accept the dangers inherent in such activities and shall not maintain a legal action against an owner for resulting injuries.*

## LEGISLATION

*SB 183 allowed the Department to offer discounted lifetime hunting and fishing licenses for children who have not yet reached their first birthday.*

*SB 222 banned the use of drones to harass hunters and anglers.*

department, to make recommendations concerning the lease of certain state-owned submerged lands in the Great Bay estuary. **Chapter 0032; Effective 7/6/2015.**

- **SB 172 Title: relative to the size limitations of off highway recreational vehicles.** This bill modifies the size limitations of off highway recreational vehicles including all terrain vehicles and utility terrain vehicles which are classified as off highway recreational vehicles. **Chapter 0033; Section 5 Effective 1/1/2016, Remainder Effective 5/7/2015.**
- **SB 173 Title: establishing a committee to study the feasibility of a club assistance program for off highway recreational vehicles.** This bill establishes a committee to study the feasibility of a club assistance program for off highway recreational vehicles. **Chapter 0034; Effective 5/7/2015.**
- **SB 182 Title: relative to the sale of freshwater fishing bait.** This bill provides that the license required for the sale of freshwater fishing bait includes aquatic invertebrates. **Chapter 0035; Effective 7/1/2015.**
- **SB 183 Title: allowing the fish and game department to offer lifetime hunting and fishing licenses for newborns.** This bill allows the fish and game department to offer discounted lifetime hunting and fishing licenses for residents who have not yet reached their first birthday. **Chapter 0036; Effective 7/1/2015.**
- **SB 222 Title: relative to harassment of hunting, fishing, or trapping.** This bill extends the prohibition on harassment of persons hunting, fishing, or trapping and adds the use of unmanned aerial vehicles to the activities prohibited. **Chapter 0038; Effective 1/1/2015.**

### Other Bills tracked:

- **HB 272 Title: designating the Ham Branch River watershed in Easton as a protected river, and exempting portions of the Ham Branch River watershed from the shoreland water quality protection act.** This bill designates the Ham Branch watershed in Easton as a protected river and exempts the Ham Branch watershed from the comprehensive shoreland protection act. This bill also prospectively removes the Ham Branch River from the shoreland water quality protection act. **Inexpedient to Legislate.**
- **HB 298 Title: relative to the seasons for taking game animals and game birds with the use of bait.** This bill requires that the use of bait in taking game birds or game animals, coyote, and other furbearing animals be permitted during any regular hunting season for such animals. **Inexpedient to Legislate.**
- **HB 379 Title: establishing a commission to study the effects of ocean acidification on commercially harvested species.** This bill establishes a commission to study the effects of ocean acidification on commercially harvested species grown along the New Hampshire coast. **Tabled.**
- **HB 499: Title: permitting New Hampshire farmers to sell certain farm raised animals directly to the public.** This bill defines “amenable species” for purposes of sale of meat and meat food products and exempts “amenable species” from certain licensing and inspection requirements. **Retained in Committee.**
- **HB 500 Title: repealing the prohibition on the use of silencing devices for taking wildlife.** This bill repeals provisions which prohibit the use of silencing devices for taking wildlife and impose penalties therefor. **Retained in Committee.**

- **HB 505 Title: relative to baiting for game birds and game animals by persons with a disability.** This bill provides that rules adopted by the fish and game department for baiting shall allow persons with a disability to engage in baiting during any regular season in which baiting is permitted. **Retained in Committee.**
- **HB 518 Title: relative to authority to establish fees for licenses issued by the fish and game department.** This bill requires that certain fees for licenses issued by the fish and game department be determined by rules adopted by the executive director under RSA 541-A and approved by the fish and game commission. **Retained in Committee, then incorporated into HB 212, which passed. (See HB 212).**
- **HB 565 Title: relative to banning the use of boats on certain waters with a confirmed exotic aquatic species infestation.** This bill permits the commissioner of the department of environmental services to issue an order banning the use of boats on certain waters with a confirmed exotic aquatic species infestation. **Inexpedient to Legislate.**
- **HB 663 Title: requiring the implementation of a plan for the transfer of the fish and game department to the department of safety on or before July 1, 2017.** This bill requires the transfer of the fish and game department to the department of safety on or before July 1, 2017. The agencies shall develop a plan for the implementation of the transfer, subject to the approval of a legislative oversight commission, and for necessary legislation required to implement the transfer. **Inexpedient to Legislate.**
- **HB 667 Title: relative to aquatic invasive species and authorizing a program to inspect boats for the presence of aquatic invasive species.** This bill authorizes the department of environmental services to develop a mechanism for containing an aquatic invasive plants infestation in a waterbody. This bill also authorizes the department of environmental services to inspect certain boats for the presence of aquatic invasive species. **Inexpedient to Legislate.**
- **SB 181 Title: relative to registration fees for hunter education programs of the fish and game department.** This bill allows the fish and game department to establish a registration fee paid by applicants to a hunter education program, and gives the applicant a credit for such amount toward the purchase of a hunting license after successful completion of the program. **Tabled.**

# RECOMMENDATIONS FOR CHANGES IN THE FEE STRUCTURE FOR ALL LICENSES AND PERMITS ISSUED BY THE DEPARTMENT

**During the biennium, the Governor signed into law HB 212, which authorized the New Hampshire Fish and Game Department to set license fees. As the biennium came to a close, the Department was formulating plans to move forward on rule-making to implement increases to various hunting and fishing license fees in order to cover the shortfall in the Department's operating budget.**

## A. EFFECTS OF INFLATION RATES ON DEPARTMENT OPERATIONS

Revenues are not keeping pace with expenses. The amount of money raised from the sale of hunting and fishing licenses is dependent on the price of the license and the number of people purchasing licenses. The number of people who buy hunting and fishing licenses is fairly flat in New Hampshire.

The problem is exacerbated by the state's aging demographic. As more folks reach age 68, they are currently eligible for free hunting and fishing

**COMPARISON OF INDIVIDUALS HOLDING PAID LICENSES  
TO HUNT AND FISH  
(From Data Collected For USFWS Certifications)**

HUNTING						
YEAR	RESIDENT HUNTING	NUMBER CHANGE	PERCENT CHANGE	NON-RES. HUNTING	NUMBER CHANGE	PERCENT CHANGE
2003	51,875	(3,242)	-5.9%	12,100	(369)	-3.0%
2004	50,777	(1,098)	-2.1%	11,810	(290)	-2.4%
2005	49,165	(1,612)	-3.2%	11,572	(238)	-2.0%
2006	49,415	250	0.5%	11,661	89	0.8%
2007	48,786	(629)	-1.3%	10,982	(679)	-5.8%
2008	48,553	(233)	-0.5%	10,601	(381)	-3.5%
2009	48,947	394	0.8%	10,473	(128)	-1.2%
2010	48,486	(461)	-0.9%	10,815	342	3.3%
2011	46,506	(1,980)	-4.1%	9,905	(910)	-8.4%
2012	48,506	2,000	4.3%	10,562	657	6.6%
2013	50,294	1,788	3.7%	11,262	700	6.6%

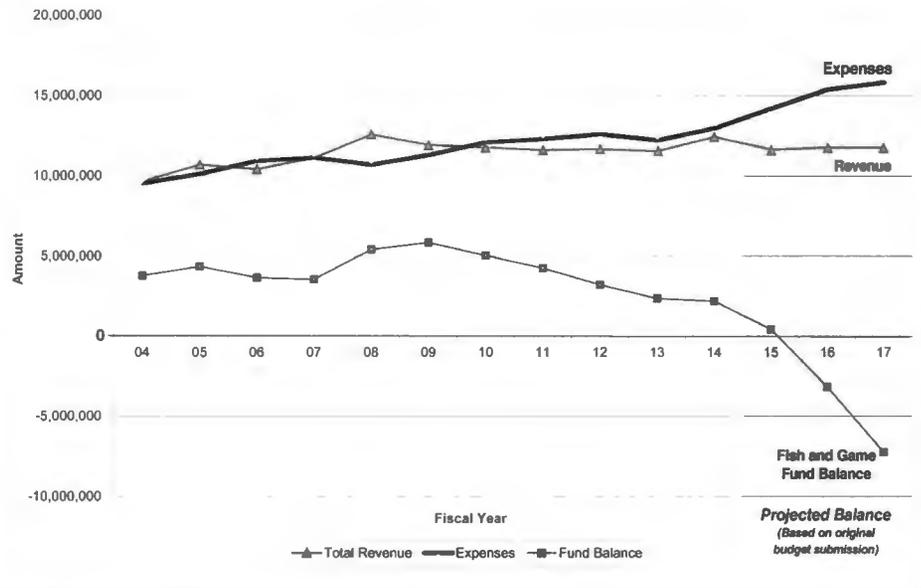
FISHING						
YEAR	RESIDENT FISHING	NUMBER CHANGE	PERCENT CHANGE	NON-RES. FISHING	NUMBER CHANGE	PERCENT CHANGE
2003	95,911	(4,572)	-4.6%	45,150	(2,898)	-6.0%
2004	97,947	2,036	2.1%	45,888	738	1.6%
2005	95,923	(2,024)	-2.1%	44,672	(1,216)	-2.6%
2006	96,854	931	1.0%	43,970	(702)	-1.6%
2007	99,878	3,024	3.1%	46,631	2,661	6.1%
2008	99,833	(45)	0.0%	45,160	(1,471)	-3.2%
2009	103,657	3,824	3.8%	46,313	1,153	2.6%
2010	100,941	(2,716)	-2.6%	45,502	(811)	-1.8%
2011	105,055	4,114	4.1%	46,086	584	1.3%
2012	107,843	2,788	2.7%	47,331	1,245	2.7%
2013	109,444	1,601	1.5%	47,234	(97)	-0.2%

licenses and not enough younger people are filling in behind. As the biennium came to a close, the state had not had a general hunting or fishing license price increase in more than a decade.

Meanwhile, the Department's expenses have steadily risen. As in the private sector, the highest increases have been in the area of health care costs for both active and retired employees. Step increases in salaries are also a factor. Additionally, payments to the State of New Hampshire for general services and increases in funds paid to the Department of Information Technology have increased substantially from just a few years ago. Two other areas of concern have been increases

in fuel costs and huge decreases in interest revenue. The Department cannot control these costs, as we can our operational expenses; they are dictated by the State's health management system, the Collective Bargaining Agreement, the Department of Administrative Services and the Department of Information Technology, as well as the economy at large.

**COSTS HAVE OUTPACED REVENUES, DRAWING DOWN THE F&G FUND. THE FUND WAS PREDICTED TO BE CLOSE TO ZERO BY THE END OF FY 15.**



**B. PREVIOUS FEE INCREASES**

Since 1935, the Fish and Game Department has depended primarily on funding derived from the sale of hunting and fishing licenses and fees on outdoor activities and hunting and fishing equipment. Currently, on average, New Hampshire's hunters and anglers pay more per individual to support the state's fish and wildlife conservation programs than any other state in New England.

**COMPARISON OF COSTS FOR FRESHWATER FISHING ACTIVITIES AS OF MAY 2015**

LICENSE TYPE	NH	ME	VT	MA
RESIDENT FISHING	\$35.00	\$25.00	\$25.00	\$27.50
NONRESIDENT FISHING	\$53.00	\$64.00	\$50.00	\$37.50

**COMPARISON OF COSTS FOR SALTWATER FISHING ACTIVITIES AS OF MAY 2015**

LICENSE TYPE	NH	ME	VT	MA	RI	CT
RESIDENT	\$10.00	0	N/A	\$10.00	\$7.00	\$10.00
NONRESIDENT	\$10.00	0	N/A	\$10.00	\$10.00	\$15.00

Fees not including agent fees.

## RECOMMENDATIONS

Hunters and anglers are no longer able to provide all the revenue necessary to sustain all Department programs or meet the challenges posed by a growing population, increased human development and legislative mandates.

The only fee change during the biennium was the elimination of the Brood Stock Salmon Permit, as that program was discontinued.

*While license purchases are level, costs for fuel, agricultural products (such as fish food), utilities, and most especially healthcare costs, continue to rise at alarming rates.*

### C. BUDGET DEMANDS

It is an understatement to say that the N.H. Fish and Game Department's budget is stressed as we try to meet all the demands of the public, along with our statutory responsibilities. In spite of limited resources, the Department has met budget challenges over the past decade through belt tightening, careful management, elimination or un-funding of vacant positions, deferring maintenance on equipment and buildings, and reducing vehicle purchases to the point where our fleet is barely adequate to meet our needs. The fact is that sportsmen's and sportswomen's license purchases are level, while costs for fuel, agricultural products (such as fish food), utilities, and most especially healthcare costs for active as well as retired employees, continue to rise at alarming rates.

COMPARISON OF COSTS FOR HUNTING ACTIVITIES, 2015

LICENSE TYPES		NH	ME	VT	MA
Cost to hunt deer – regular season	RESIDENT	\$24.50	\$25.00	\$25.00	\$32.50
	NONRES.	\$105.50	\$114.00	100.00	\$104.50
Cost to hunt deer – archery only	RESIDENT	\$24.50	\$25.00	\$48.00 <sup>1</sup>	\$37.60 <sup>1</sup>
	NONRES.	\$75.50	\$74.00	\$75.00	\$109.60
Cost to hunt bear	RESIDENT	\$40.50	\$52.00	\$25.00 <sup>3</sup>	\$37.50
	NONRES.	\$153.50	\$188.00 <sup>2</sup>	\$100.00 <sup>3</sup>	\$109.50
Cost to hunt turkey (Spring)	RESIDENT	\$40.50	\$45.00 <sup>4</sup>	\$48.00 <sup>5</sup>	\$37.50 <sup>6</sup>
	NONRES.	\$136.50	\$134.00 <sup>4</sup>	\$138.00 <sup>5</sup>	\$109.50 <sup>6</sup>
Cost to hunt deer (reg. & archery), bear, turkey (Spring)	RESIDENT	\$78.50	\$97.00 <sup>7</sup>	\$71.00	\$47.60
	NONRES.	\$257.50	\$282.00	\$176.00	\$119.60
Cost to hunt moose	RESIDENT	\$189.50	\$92.00	\$135.00	NA
	NONRES.	\$630.50	\$714.00 <sup>8</sup>	\$475.00	NA

<sup>1</sup> Add on to license.

<sup>2</sup> For non-residents to hunt bear outside the deer season. A special bear permit is required after the start of the deer season which costs \$40.00.

<sup>3</sup> Late season bear tag included with license. Early season bear permit is \$5.00 for residents and \$15.00 for non-residents (not included in table cost).

<sup>4</sup> A combined spring/fall permit required (resident & non-resident) which allows the taking of two bearded turkeys in the spring and two turkeys of either sex in the fall, but an individual WMD bag limit cannot be exceeded.

<sup>5</sup> 2 spring birds.

<sup>6</sup> Season bag limit of 2 birds (2 spring or 1 spring and 1 fall).

<sup>7</sup> A Superpack is now available for residents only. This license permits a person who has met the eligibility requirements for each license or permit to hunt and fish for all legal game and fish species subject to all the laws covering these activities: fishing, hunting, and archery. The Superpack license includes muzzleloader, crossbow, migratory waterfowl, pheasant, spring/fall turkey, bear, coyote night hunt, and three expanded archery antlerless permits. The Superpack license also includes one free chance in the moose lottery and entry into a special category in the annual any-deer permit lottery. This license costs \$200.00.

<sup>8</sup> Nonresidents can purchase 3 chances for \$25, 6 for \$35, 10 for \$55 as well as multiples of 10 chances.

### **Federal Funds at Risk**

The Department receives a significant portion of its revenue from the Federal Government. Federal revenues represent nearly one-third of our budget. Not only are significant amounts of these funds annual appropriations, but the Wildlife and Sportfish Trust Funds that are the foundation of the North American Model of Wildlife Conservation are being questioned by the industries that pay them. Furthermore, due to declining gun and ammunition sales, projections for these funds predict decreases by as much as 25% in the next federal fiscal year.

### **Expanding our Constituency**

The New Hampshire Fish and Game Department continues its efforts to meet our obligations. Efforts to secure alternative funding for search and rescue, which is a constant drain on the Fish and Game Fund, met with some success during the biennium with the institution of the Hike Safe Card. While no panacea, sales of the card are making a significant contribution to the Search and Rescue Fund.

We have worked diligently to broaden our constituency through outreach, education and training. The success of our Becoming an Outdoors-Woman (BOW) program is a good example. This popular program involves hundreds of women each year in learning skills related to outdoor recreation. Without question, BOW participants are among our most enthusiastic supporters.

The Department has begun work on creating a thoughtful, outcome-based strategy for recruiting and retaining hunters and anglers. Our Hunter Education Program educates nearly 5,000 new hunters every year. Specialty courses at Owl Brook Hunter Education Center help those interested in hunting gain skills and confidence. The Let's Go Fishing Program introduces children and adults to the fun of fishing. My Outdoors TV brings the excitement of outdoor recreation to a viewing audience of thousands. We are involving youth through summer activities at Barry Conservation Camp and Owl Brook.

We have also made it a priority to build connections with non-traditional constituencies who benefit from Fish and Game programs, but who have not had a direct avenue for contributing to the cost of operating the Department. We have met with and accomplished cooperative programming with the paddling community and hikers. We connect with wildlife watchers through popular publications such as *N.H. Wildlife Journal* and outdoor adventure talks.

### **New Funding Sources**

As we end FY15, the Department is moving into new, and uncomfortable territory with the state General Fund providing approximately \$1.5 million of funding to Fish and Game over the last biennium and \$1.2 million needed to prepare for the next, along with significant increases in license fees. All parties, the Governor, the Legislature, and the Department, understand this is undesirable in the long run and work needs to be undertaken to revise our funding model. However, lack of political will and opposition to additional fees has so far stymied success in funding diversification.

Buy your voluntary N.H.

# Hike Safe CARD

- Supports N.H. Fish and Game search and rescue efforts
- Exempts holder from rescue cost reimbursement

Your  
back-up plan  
in the  
great outdoors!



*We have also made it a priority to build connections with non-traditional constituencies who benefit from Fish and Game programs, but who have not had a direct avenue for contributing to the cost of operating the Department.*

## RECOMMENDATIONS

### D. INTENSIVE ANALYSIS AND JUSTIFICATION FOR ANY GENERAL FUND SUPPORT FOR FISH AND GAME DEPARTMENT PROGRAMS:

During the biennium, the Fish and Game Department received General Funds for both the Nongame and Endangered Wildlife Program matching grant and a separate allotment to the Fish and Game Fund to be used for the general operation of Fish and Game programs.

#### **Conservation of Nongame Species**

In 1988, the N.H. Legislature established the Nongame and Endangered Wildlife Program, assigning the Fish and Game Department as the steward for the state's nongame wildlife – species not hunted, fished or trapped. For 25 years, the Nongame Program at N.H. Fish and Game has worked under legislative mandates of the state Endangered Species Act (RSA212-A) and the Nongame Act (RSA 212-B) to protect over 400 species of mammals, birds, reptiles, and amphibians, as well as thousands of insects and other invertebrates and the habitats they depend on. To fund this work, the Legislature also established a grant that matches private donations raised by the Nongame Program dollar-for-dollar, up to \$50,000 annually.

Over the past 25 years, the Nongame Program at N.H. Fish and Game has grown from a one-person operation to a fully staffed conservation program that is a leader for the state. The Nongame Program works with other state agencies, conservation organizations and non-profits to develop and implement effective conservation strategies to protect and enhance this diverse group of wildlife and their habitats. The Nongame Program led the effort to develop the state's first comprehensive Wildlife Action Plan that was approved by the U.S. Fish and Wildlife Service in 2006 and is still being used today by local communities and land-use planners across the state to guide conservation planning. An update of the plan is slated for completion during the fall of 2015.

The Nongame Program does not receive any funding from the sale of hunting or fishing licenses and by law, the Department is not allowed to use federal Wildlife Restoration funds to pay for the work of conserving endangered species. The State Wildlife Grants (SWG) program administered by the U.S. Fish and Wildlife Service is appropriated annually and provides the bulk of funding for the Nongame Program. In order to qualify, the Department must contribute a percentage of the funding through non-federal sources as match, making the state contribution and private donations even more critical.

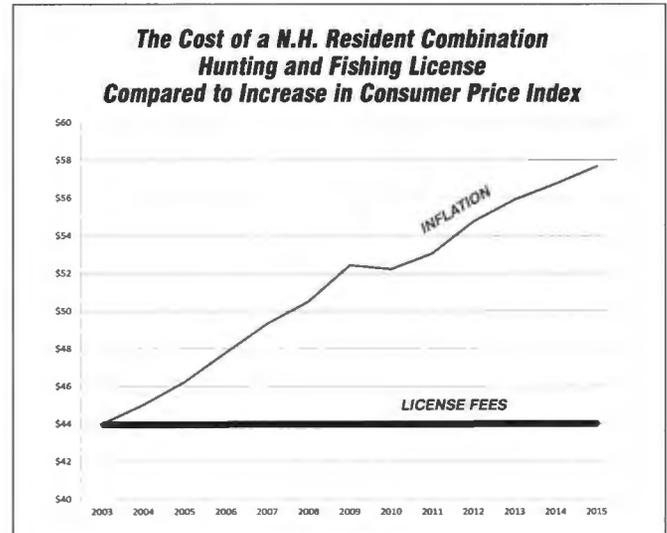
The annual expenditure of \$50,000 in General Funds, as match for donations, was and continues to be critical in supporting this valuable program. Over the past 25+ years, the number of private supporters who donate to the Nongame Program has steadily grown and in recent years private donations have exceeded the annual match contributed by the state General Fund. Continued support by private donors and the matching grant from the state General Fund remains a vital component of the private-state-federal mixture of funding that will carry the Nongame Program into the future. With more than 25 years of wildlife monitoring and management, plus outreach and education, and close work with conservation partners, the Nongame Program remains dedicated to restoring and protecting the great diversity of nongame, threatened and endangered wildlife and their habitats in the state.

*The Nongame Program led the effort to develop the state's first comprehensive Wildlife Action Plan, used by local communities and land-use planners across the state. An update will be completed by the fall of 2015.*

### General Fund Support for Fish and Game Operations

As the Fish and Game Department began developing the FY 2014-2015 budget, it quickly became apparent that without additional funding or crippling reductions in staff and programs, the Fish and Game Fund would be overspent and end the biennium with a negative balance. This was not the result of establishing new programs, creating new positions, nor even reductions in revenues. Rather, it stemmed primarily from operating for over a decade without any significant fee increases or new revenue sources, while at the same time continuing to maintain the Department's services at a level the public had come to expect. Essentially inflation, in the form of higher costs for operating expenses, especially in energy and health care, caught up with the balance in the Fish and Game Fund. The funding crisis has been extensively studied by the Legislature through two successive Commissions to Study Opportunities and Options to Improve the Sustainability of the Fish and Game Department (2013 - HB 588; and 2014 - HB 256).

Divisions of the Department primarily funded by Fish and Game funds (as opposed to federal grants and dedicated accounts), such as Law Enforcement, were especially vulnerable to major budget reductions. While this fact was generally acknowledged by the Legislature, efforts to expand our funding base with new sustainable revenue sources proved politically unpalatable. Therefore, the Legislature opted to put State General Funds into the Fish and Game Fund in order to avoid drastic reductions in Department functions. These deposits were made in August of each fiscal year. The FY 14 deposit was \$699,000.00 and FY 15 was \$893,000.00. The intent was to create a bridge to some future sustainable financial program. At the time of this writing, the form sustainable funding might take is still elusive and as the Department is working on the next budget, there seems to be even less political enthusiasm for creating new revenue sources.



*Fish and Game has been operating for over a decade without any significant fee increases or new revenue sources, while at the same time continuing to maintain the Department's services at a level the public had come to expect.*

# WILDLIFE HERITAGE FOUNDATION OF NEW HAMPSHIRE

## MAKING THINGS HAPPEN FOR FISH AND GAME!



Presenting a \$6,500 check from the Wild Game Weekend to the Barry Camp Fund, managed by the Wildlife Heritage Foundation, are (L-R) volunteer event coordinator Gary Sleeper, Director Glenn Normandeau, Mike Normandin of the Belknap County Sportsmen, Foundation Board member Kathleen Paine and Foundation Chairman Steve White.

The positive impact of the Wildlife Heritage Foundation of New Hampshire, Fish and Game's official nonprofit partner, continued to grow during the biennium. In 2013, the Foundation hit a new record, awarding grants totaling \$81,700 to Fish and Game. Overall during the biennium the foundation provided \$165,575 in grant funding for 23 Fish and Game programs. These funds help in many different ways – covering the tanks at the Berlin Fish Hatchery to reduce bird predation; purchasing a much-needed boat for the Law Enforcement Division's Dive Team; installing kiosks at Wildlife Management Areas; and supporting Operation Game Thief. A foundation grant also funded historical research for the observance of the 150th anniversary of the New Hampshire Fish and Game Department in 2015. In addition, the Foundation collected more than \$50,000 for Barry Camp and the K-9 Search and Rescue program.

The Foundation works with educators, scientists, researchers and wildlife experts to leverage resources that help keep our fish and wildlife communities healthy and abundant. Its mission is to conserve wild places and things that are an integral part of New Hampshire's culture and heritage, so they are preserved for generations to come.

Established in 2006, the Foundation has supported a wide range of Fish and Game projects over the years, from aerial stocking of trout into remote ponds to improvements at Owl Brook Hunter Education Center, building the Barry Camp Fund, rehabilitating orphan bears and restoring Karner blue butterflies.

One program that has benefited from Foundation support is Fish and Game's canine law enforcement. The first K-9 was acquired in 2003. By 2010, Conservation Officer Mark Hensel and "Poacher" had responded to over 150 law enforcement calls and participated in 100 search and rescue missions. A Foundation grant to the canine program in 2012 allowed Hensel and his new dog "Sig" to attend a training academy with an emphasis on environmental law enforcement. Hensel came back and developed a canine training curriculum specific to the needs of N.H. Fish and Game. The Department now has three trained officer/canine teams.

Funding for the Wildlife Heritage Foundation's grants program comes from individual and corporate donors and from the annual auction of fish and game permits and licenses. The foundation accepts general and targeted cash donations, memorial gifts, and welcomes annuities and endowments. In most cases, contributions are tax-deductible.

For more information, visit: [nhwildlifeheritage.org](http://nhwildlifeheritage.org).



**WILDLIFE HERITAGE  
FOUNDATION of NH**

SHARING THE PAST, SHAPING THE FUTURE.

# APPENDIX



PHOTO - ARCHIVE PHOTO BY BOB YOUNG

## FISH AND GAME COMMISSION

### **New Hampshire Fish and Game Commission members at the close of the biennium (June 2015)**

**Belknap County**  
John W. McGonagle

**Carroll County**  
David L. Patch  
*Vice Chair*

**Cheshire County**  
Robert Phillipson

**Coastal**  
Fred Clews Jr.

**Coos County**  
Theodore A. Tichy  
*Chair*

**Grafton County**  
Todd Baldwin

**Hillsborough County**  
Walter Morse

**Merrimack County**  
Vincent Greco

**Rockingham County**  
James W. Ryan  
*Secretary/Treasurer*

**Strafford County**  
Barry Carr

**Sullivan County**  
Tom Hubert

## CENTURY-LONG TRADITION OF SERVICE

On behalf of the citizens of the State of New Hampshire, the New Hampshire Fish and Game Commission protects and manages New Hampshire's fish, wildlife and habitat resources for current and future generations while providing opportunities for citizens to use these resources for recreation, learning and commerce.

The N.H. Fish and Game Commission is made up of 11 New Hampshire citizens (one from each county and one representing saltwater interests), appointed by the governor and council. The Commission focuses its service by setting policy for: general conservation of wildlife; development, funding and implementation of a strategic plan for the operation of the Department; acquisition and development of public access to lands and waters; public education and building support for Department programs; and establishment of positions on proposed legislation that affects the Department and fish, wildlife and marine resources. The Commission carries on a proud tradition of service. For more than a century, New Hampshire's wildlife agency has restored, protected and managed the state's marine, fish and wildlife and their habitats.

First established in 1865 as the Fisheries Commission, this council's early mission revolved around the restoration of sea-run fish and the introduction of new varieties of freshwater fish. In 1880, the Fisheries Commission was reorganized into the Commission of Fisheries and Game, reflecting a growing concern for the scarcity of deer and other wildlife. In 1913, the Legislature abolished the existing board of Fisheries and Game Commissioners and created a new paid Office of the Fish and Game Commissioner. This move acknowledged the rising importance of fishing and hunting-related spending to New Hampshire's economy.



©NHFG - STAFF PHOTO

*Fish and Game Commissioners in June 2015. Front row, left to right: Todd Baldwin, James Ryan, Theodore Tichy, David Patch, Walter Morse. Standing, left to right: Vincent Greco, Fred Clews Jr., Barry Carr, Tom Hubert, and Robert "Moose" Phillipson. Commissioner John McGonagle is not pictured.*

In 1935, the State Legislature laid the groundwork for the modern fish and wildlife agency we know today. It established the N.H. Fish and Game Department, an organization with a new emphasis on biological research, under the guidance of a Fish and Game Commission. The agency's responsibilities broadened in 1965, when the Legislature established the Marine Fisheries Division, giving it responsibility "for the regulation and promotion of both recreational and commercial marine fishing in the salt waters of the state." Fish and Game's mission was further expanded in 1988, when the Legislature broadened the Department's authority to include all species of fish and wildlife, not just those involved in traditional hunting, trapping and fishing activities.



2014 Commission Award of Excellence recipients, from left to right: Gray Cornwell, Paul Chartrain, George Embley, Jack Gould, Douglas Barker, Patrick McCarthy, Jerry Monkman, Gene Chandler and Matt Cross (accepting for Janine Weins).

## GUIDING POLICY AT FISH AND GAME

The modern N.H. Fish and Game Commission focuses its service by setting general policy related to the Department's work. A long-range strategic plan guides the direction of the Fish and Game Department. Commission policy supports the acquisition, development and maintenance of public access to lands and waters for recreational use consistent with New Hampshire laws and regulations. The Commissioners support Department activities that educate the public and build awareness of and support for Fish and Game programs and objectives. They establish positions on all proposed legislation that affects fish and wildlife resources, thus setting policy to guide overall management of the state's fish and wildlife resources and habitats. One of the Commission's primary responsibilities is to nominate the Department's Executive Director when such action is needed.

Commissioner Tom Hubert served as Commission Chair through June of 2014, and Commissioner Ted Tichy served as chair through June of 2015. During the biennium, the Fish and Game Commission has participated actively in the legislative process and was instrumental in helping constituents better understand the legislative issues that the Fish and Game Department faced during this period, as well as the Department's funding challenges.

The Commission Awards of Excellence program continued, annually recognizing citizens and organizations that support the Department's mission through their efforts.

*The Commission Awards of Excellence program continued, annually recognizing citizens and organizations that support the Department's mission through their efforts.*

## FISH AND GAME COMMISSION

### COMMISSIONERS WHO RETIRED DURING THE BIENNIUM

Three commissioners retired during the biennium, after many years of service: Eric Orff, Robert S.S. Blake and Sharon Guaraldi.



*Sharon Guaraldi was the first woman to serve as Commission Chair.*



*Sharon Guaraldi and Robert Blake are enthusiastic supporters of the Becoming an Outdoors-Woman Program.*



*Eric Orff became a Commissioner after serving many years as a wildlife biologist for Fish and Game, including work as the Department's bear, moose and furbearer biologist.*



## LOOKING TO THE FUTURE OF FISH AND WILDLIFE MANAGEMENT

During the biennium, Executive Director Glenn Normandeau continued to maintain Department services and map out a way forward in a time of expanded Departmental responsibilities and limited revenues. In meeting these challenges, Fish and Game has continued to explore ways to seek new sources of revenue for Department activities – through State General Funds, federal grants, nonprofit partnerships, and other initiatives.

Despite revenue limitations, Fish and Game continues to be responsible for the wide-ranging work of fish, wildlife and marine research and management; conservation of threatened and endangered species through the state's Wildlife Action Plan; enforcement of fish and wildlife laws; conservation of land and natural places; providing search and rescue in wilderness areas; overseeing off-highway vehicle enforcement; ensuring access to the state's public waterbodies; communicating about the agency's work; educating the public about conservation issues; and providing a host of other essential public services for all New Hampshire citizens. This Biennial Report outlines the scope and diversity of this charge. These multiple responsibilities support activities that are critical for New Hampshire's economy and quality of life.

## GAINING SUPPORT FROM BROADER CONSTITUENCIES

The good news is that, as agency resources are stretched to the limit, the broader constituencies that benefit from the Department's programs are beginning to help pay for them – at least in small ways. Some General Funds were provided to the Department during each year of the biennium, and a new Hike Safe Card was made available to encourage outdoor enthusiasts to contribute to the Search and Rescue Fund. In addition, the Legislature granted the Department the authority to set license fees.

It is also promising that a recent Department survey provides strong evidence that New Hampshire citizens care deeply about New Hampshire's wildlife resources and place great value on the work of the Department. With complex wildlife threats arising – often quickly – in a fast-changing world, it is essential to have seasoned staff in place monitoring and managing the resources.

This biennium has given us a chance to celebrate the successes since fledgling conservation efforts begun in 1865. Since that time, Fish and Game has developed into an effective modern Department. It is critical that New Hampshire citizens remain vigilant stewards of our natural world and continue their support for the Department to ensure that we have the capacity to meet the challenges future years are sure to bring.

## INSIDE THE DIRECTOR'S OFFICE

The Executive Director's Office oversees all the activities, functions and employees of the New Hampshire Fish and Game Department and enforces state laws relating to fish, wildlife and marine resources. Fish and Game staff



Executive Director  
Glenn Normandeau

*This biennium has given us a chance to celebrate the successes since fledgling conservation efforts begun in 1865. Since that time, Fish and Game has developed into an effective modern Department.*

## EXECUTIVE DIRECTOR'S OFFICE

that are part of the Executive Director's Office include coordinators for Federal Aid, Environmental Review and Legislation/Rules, as well as Human Resources, Landowner Relations, and liaison with the Wildlife Heritage Foundation of New Hampshire.

### HUMAN RESOURCES

The Human Resources (HR) staff provides administrative support to the office of the Executive Director and to the six divisions that comprise the New Hampshire Fish and Game Department. Human resources includes the Human Resources Administrator, Human Resources Coordinator and Payroll Officer. HR responsibilities include: bi-weekly payroll; benefits; the state's Wellness Initiative; recruitment; certification, selection and orientation; reclassification assistance; Workers Compensation; Family and Medical Leave; administration of employment records; Federal and State labor law compliance; and labor relations and conflict resolution.

During the biennium, Human Resources continued to work on various projects, trainings and initiatives for both the Department and State, as well as providing employees with services to assist them with employment issues, needs or concerns.

### ENVIRONMENTAL REVIEW

The Environmental Review Coordinator also serves in the Executive Director's office, overseeing complex environmental reviews involving coordination with various divisions of the Department. Technical guidance is provided to individuals, environmental consultants, federal and state agencies, municipalities and non-governmental organizations to avoid, minimize, and/or mitigate impacts to fish and wildlife resources and their habitats from proposed development projects. The types of projects include, but are not limited to, hydro-power development and compliance; surface and ground water withdrawals; dam removals, fish passage development; water quality and contaminant impacts; wetland impacts, aquatic herbicide treatments, dredge projects; and, review of environmental regulations that affect fish and wildlife resources and their habitats. The Environmental Review Coordinator is the liaison with many statewide policy bodies, including the state Wetlands Council, Water Council, Natural Resources Committee, Dredge Task Force, Pesticide Board and the Inter-Agency Permitting Initiative.

*Technical guidance is provided to individuals, environmental consultants, federal and state agencies, municipalities and non-governmental organizations to avoid, minimize, and/or mitigate impacts to fish and wildlife resources, and their habitats, from proposed development projects.*

### NEW AUTOMATED LICENSING SYSTEM

The Business Division's workload continued to grow during the biennium as a result of added and diverse programming at Fish and Game. The division's licensing section has made effective use of new technology to expand online license purchasing capabilities and enable more efficient operations requiring less manual data entry.

Fish and Game achieved its goal of equipping license agents with point-of-sale service technology, by making it a reality with our calendar year 2014 licenses. This has replaced cumbersome monthly data reporting with an instantaneous data stream. This move towards point-of-sale licensing cut printing costs considerably, as the printing of multiform licenses is no longer required.

Along with the point-of-sale technology for our license agents, we also successfully moved our Off Highway Recreational Vehicle registrations online with point-of-sale capabilities for our agents. The combination of these successful transformations resulted in fewer personnel needed for manual data entry. Data entry staff had previously numbered four; they are now down to one. This allowed the Department to reclassify two of these positions and relocate them to other areas of the Department, where they were critically needed.

### FLEET MANAGEMENT

Fleet management continues to be a challenge, as the Department has not been able to upgrade its aging vehicles as quickly as in years past because of budgetary and purchasing constraints. Fish and Game continued to search for ways large and small to save money, such as by buying consumable vehicle supplies in quantity. The hiring of a part-time mechanic during this biennium to assist our full-time mechanic on staff has helped reduce the cost of outsourcing regular vehicle maintenance and service.

The Department still does not employ a staff person providing administrative fleet management, shifting the burden of these administrative duties onto division staff already shouldering many other responsibilities.

### MANAGING COMPLEX FINANCES

The Business Division plays a key role in managing the complex financial landscape that keeps the New Hampshire Fish and Game Department afloat. Fish and Game uses revenue from fishing and hunting license fees, federal funds and other sources to accomplish its broad mission of conserving, managing and protecting the state's fish, wildlife and marine resources and their habitats; informing and educating the public about these resources; and providing opportunities for people to use and appreciate these resources.

Fish and Game's budget sustains the full range of habitat and fish and wildlife management tasks, plus conservation education, law enforcement, search and rescue activities, and support work. All of these are essential to ensuring that the Department can effectively serve the people and wildlife of New Hampshire.



The issuing of licenses has come a long way since this Hunting Permit was issued in 1915. During the biennium, online license sales and point-of-sale capabilities saved both staff time and money, as demonstrated by license agent Jessica Hamel (below).



### FACILITIES MANAGEMENT, HABITAT PROTECTION AND BOATING ACCESS

The Facilities and Lands Division is responsible for the management and maintenance of all Fish and Game properties statewide, including over 160 buildings, 142 boat ramps, 130 dams, 7 fish ladders and over 74,541 acres of



*The Facilities and Lands Division is responsible for the management and maintenance of all Fish and Game properties statewide, including over 160 buildings, 142 boat ramps, 130 dams, 7 fish ladders and over 74,541 acres of land.*

*The Facilities and Lands Division has three distinct missions: boat access construction and maintenance, building maintenance, and land management.*

wildlife management areas, conservation easements, and other interests. The Division also provides the design and construction of boating access facilities, fabrication of information kiosks and portable sanitary facilities. The Lands side of the division negotiates land and habitat acquisitions, and manages conservation easement areas and land use requests through Special Use Permits.

The Facilities and Lands Division has three distinct missions: boat access construction and maintenance, building maintenance, and land management. Boat access construction involves the reconstruction of existing

sites, or new ramp construction. The work includes removal of trees, grading the site, constructing precast concrete planks and stone for erosion protection, installing drainage improvements and ancillary items, and installing landscaping. Routine maintenance of boat access site consists of mowing, tree trimming, filling potholes in driveways, kiosk repair and managing portable toilet rentals. Building maintenance ranges from the routine light fixture replacement to office renovations and roof replacements. Our land management projects include processing Special Use Permits (SUP), coordinating land acquisitions, negotiating conservation easements, and resolving land use and ownership disputes.

#### MAJOR PROJECTS

- The Facilities and Lands construction crew refurbished the N.H. Department of Environmental Services (NHDES)-owned boat access to **Great Pond in Kingston**.
- **Stinson Lake, Rumney:** The Facilities and Lands crew constructed a boat access at this Road To Public Waters site. The site had severe erosion problems and large boulders near the shore, making boat launches difficult. The refurbished site features flexible porous paving grids filled with stone, providing a non-erosive pervious surface and a concrete plank ramp into the lake.
- **Baxter Lake, Rochester:** The existing concrete plank ramp was extended deeper into the lake as a countermeasure to mitigate the creation of a scour hole caused by “power loading” boats onto trailers.
- **Otter Lake, Greenfield:** This boat access reconstruction project is the result of a Memorandum of Understanding with the Department of Resources and Economic Development (DRED) The site is within the Greenfield State Park. DRED does not have the equipment or expertise to construct boat ramps and requested Fish and Game to assist.

- The construction crew and building maintenance assisted the Public Affairs division in erecting a pavilion at the **Owl Brook Hunter Education Center** for shotgun instruction and practice. The 20 x 30-foot structure has eight timber posts mounted to concrete piers and a pre-fabricated roof truss system.
- The construction crew made improvements to the foundation drainage system at the Depot House, a 150-year-old railroad station being used as offices at the **Great Bay Discovery Center** in Greenland. The building crew replaced the deck and constructed roof repairs. Window replacement was completed by a contractor. All work was performed through a federal grant for the Great Bay National Estuarine Research Reserve.
- The Department's commitment to energy improvements was recognized by Governor Hassen by presenting three individuals at N.H. Fish and Game with **Excellence in Energy Efficiency Awards** at the 2014 Annual State Energy Conference. The awards were given for innovative energy use reporting methods, preparation of improvement contracts utilizing utility company rebates, and promotion of employee behavioral changes for energy conservation.
- The division **replaced five rooftop air conditioning units** with high efficiency equipment, with 8% of project cost provided by a utility company rebate. The Energy Management office also contributed 83% of project cost through a grant.
- The division received **Energy Project of the Month** recognition for improvements to the garage lights. The original 175-watt metal halide lights were replaced with 101-watt Light Emitting Diode (LED) lights. The new lights reduced power consumption by 43% and provide double the illumination to the work space. The maintenance crew also cleaned and painted the walls and ceiling of the garage to enhance light distribution.
- The **high pressure sodium (HPS) parking lot lights at headquarters were replaced** with LED lights. The project reduced power consumption by an incredible 87% with a slight increase of illumination.
- **The Facilities and Lands office was renovated** with a new vinyl plank floor, wall relocations, telecommunication relocation and furniture upgrades. The former carpeting was severely worn and had ripples that were unsafe. The new flat files will allow the division to properly store and retrieve our large format plans.
- The construction crew **installed a septic and leach field system** and made internal plumbing improvements that the Law Enforcement Division uses as a residence for Conservation Officer Trainees. The house is part of the former Department game farm used for research and is approximately 100 years old.



*A new shotgun pavilion was erected at Owl Brook Hunter Education Center by the construction crew.*

*New LED lights for the garage reduced power consumption by 43% and provide double the illumination to the work space.*

## FACILITY AND LANDS DIVISION

- N.H. Fish and Game acquired the 200+ acre **Conner Farm Wildlife Management Area** in Exeter from the N.H. Department of Transportation. The WMA included the original 1850 farmhouse. Fish and Game had no use for the farmhouse and subdivided a 5-acre parcel with the farmhouse for sale. The parcel and farm house were transferred to descendants of the Conner Family.
- Our Land Agent **coordinated the transfer of ownership** of a maintenance shed from the N.H. Department of Transportation to Fish and Game's Law Enforcement Division. The Law Enforcement Division had a need for a storage facility for snowmobiles and boat in the northern part of the state.

### PHYSICAL PLANT AND PROPERTY APPRAISAL

Significant additions to our physical plant inventory include the construction of a 30 x 20-foot pavilion at the Great Bay Discovery Center for assembly and dining for school programs and the shotgun pavilion at the Owl Brook Hunter Education Center. Continuing our focus on energy improvements, the high bay metal halide lights in the maintenance garage were replaced with LED lights, significantly reducing energy usage. The headquarters office annex received renovation improvements to replace worn carpet with new vinyl plank flooring. The office was also painted and telecommunication lines rerouted. In partnership with N.H. Department of Environmental Services, our boat access construction crew refurbished the DES-owned access to Great Pond in Kingston, in exchange for the Dam Bureau reconstructing the Jones Pond Dam in Middleton. Working with our Law Enforcement Division and the Department of Transportation, our Land Agent facilitated the transfer of ownership of a maintenance shed on the Kancamagus Highway in Conway.

#### UNDEVELOPED LAND ACQUIRED DURING THE 2013 - 2014 BIENNIUM

Land Conservation Projects FY 2014  
July 1, 2013 - June 30, 2014

TOWN	PARCEL NAME	F&G INTEREST	ACREAGE
Colebrook	Clay Pond Holdings Tract	Fee	2.4
<b>Total Fee Owned</b>			<b>2.4</b>
Hooksett	Hinman Pond Tract	Easement	471.41
<b>Total CE Area</b>			<b>471.41</b>
Exeter	Conner Tract (Conner Farm WMA)	Surplus	(5.09)
<b>Total Surplus</b>			<b>(5.09)</b>
<b>TOTAL</b>	<b>LANDS CONSERVED</b>		<b>468.72</b>



©NHFG STAFF PHOTOS

**UNDEVELOPED LAND ACQUIRED  
DURING THE 2014 – 2015 BIENNIUM**

**Land Conservation Projects FY 2013  
July 1, 2014 – June 30, 2015**

TOWN	PARCEL NAME	F&G INTEREST	ACREAGE
Stark	Marquis Parcel		
(Upper Ammonoosuc River WMA)	Fee	96.68	
Durham	TNC- Langley Tract		
(Great Bay NERR WMA)	Fee	48.44	
Stratham	Gowen Tract (Great Bay NERR WMA)	Fee	7.4
Springfield	Knowlton Tract (McDaniels Marsh WMA)	Fee	65
Hillsborough	Low Stevens Tract (Farrar Marsh WMA)	Fee	150
<b>Total Fee Owned</b>			<b>367.52</b>
Canterbury	Spender Hill Farm Tract		
(Morrill Pond WMA)	Easement	118	
Conway	TNC Green Hills SE	Easement	1,013.03
Conway	TNC Green Hills SW	Easement	308.41
<b>Total CE Area</b>			<b>1,439.44</b>
<b>Total Surplus</b>		<b>Surplus</b>	<b>0</b>
<b>TOTAL</b>	<b>LANDS CONSERVED</b>		<b>1,806.96</b>

*In February 2015, the Governor and Executive Council approved the donation of 150-acre tract in Hillsborough by Loring Low Stevens, shown above with Executive Director Glenn Nomandeu and Ian McSweeney of the Russell Farm and Forest Conservation Foundation (right). The parcel is located between the 1,600-acre Low State Forest, named after Ms. Steven's parents, and the 475-acre Farrar Marsh Wildlife Management Area.*

# FACILITY AND LANDS DIVISION

## LAND ACQUISITION

The Public Boat Access Coordinator and Land Agents have worked with the Lands Team, consisting of members from several divisions within the Department having interest in land and easement acquisition. The Division acquired 2.4 acres of land for conservation, and an additional 367.52 acres for wildlife habitat during the FY14/15 Biennium. A 5.09-acre tract of the Conner Farm WMA was sold as surplus in FY 2014.

*Acquisitions during the biennium brought the total acreage managed by the Department to 74,541.*

### LAND ACQUIRED BY BIENNIUM

ALL	TOTAL ACREAGE THIS BIENNIUM	EASEMENT	FEE
Previous years	31,771		
2001-2003	56,954	0	25,183
2003-2005	57,970	830	186
2005-2007	59,499	611	918
2007-2009	60,733	797	467
2009 - 2011	69,726	4,134	3,256
2012 - 2013	72,265	490	2,049
2014 - 2015	74,451	1,911	365

EASEMENT	TOTAL ACREAGE THIS BIENNIUM	EASEMENTS ACQUIRED
Previous years	11,764	
2001-2003	11,764	0
2003-2005	12,594	830
2005-2007	13,205	611
2007-2009	14,002	797
2009-2011	18,600	4,134
2012 - 2013	19,090	490
2014 - 2015	21,001	1,911

FEE	TOTAL ACREAGE THIS BIENNIUM	ACQUIRED IN FEE
Previous years	20,007	
2001-2003	45,190	25,183
2003-2005	45,376	186
2005-2007	46,294	918
2007-2009	46,761	467
2009-2011	51,126	3,256
2012 - 2013	53,175	2,049
2014 - 2015	53,540	365

Data in bold type are from the new database. Discrepancies in totals for years prior to 2009 are the result of earlier reporting methods. The improved accuracy is due to the new database.

These acquisitions bring the total acreage managed by the Department to 74,541. Of this total, in this biennium, 53,540 acres are owned outright by the Department; 21,001 acres comprise various types of easements monitored by Fish and Game.

### PROJECTS IN THE WORKS

We have several boat access projects “shovel ready” for construction in 2015 or early 2016. Other access projects are in various stages of project development, environmental permitting, or funding considerations. We are preparing specifications for construction projects we expect to bid and build later in 2015 into the spring of 2016, including:

- Concrete sidewalk replacement at headquarters
- Great Bay Boardwalk reconstruction
- Region 4 roof replacement
- Cocheco River Fishway improvements
- Window replacement at headquarters

Our recently completed remodel of the Facilities and Lands office will allow better cataloging and retrieval of our large format plans. Presently, the plans are stored in rolls in no particular order. We will be reviewing all plans and filing in new flat files and labeling the drawers. An electronic cataloging system will be created to retrieve plans easily.



*The aging boardwalk at Great Bay Discovery Center is scheduled to be replaced in the next biennium, with assistance from the Facility and Lands Division.*

## INLAND FISHERIES DIVISION



*A Twin Mountain Hatchery worker ca. 1948. Today, Fish and Game's six fish hatcheries produce nearly one million fish each year.*

### CONSERVING OUR FISHERIES

The Inland Fisheries Division is responsible for all freshwater fish within both the state and interstate waters. Fisheries biologists and fish culturists work to protect and restore fish resources and aquatic habitat and to provide New Hampshire anglers with diverse fishing opportunities. This Division is responsible for operating Fish and Game's six fish hatcheries, which during the biennium produced nearly one million fish each year to meet a variety of the Division's management programs

### LARGE LAKES PROGRAM, REGION 2

- Annual fall trap-netting surveys were conducted to monitor landlocked salmon size and age-class characteristics at Big Squam, Sunapee, and Winnepesaukee lakes; over 100,000 landlocked salmon eggs were procured annually from Lake Winnepesaukee to maintain the statewide program.
- Fall gill-netting surveys were conducted to monitor lake trout spawning-stock size characteristics at Newfound, Nubanusit, and Winnisquam lakes.
- Hydro-acoustic and trawl netting surveys were conducted to monitor pelagic forage-fish species composition (primarily rainbow smelt), size characteristics, spatial distribution, and density, at Big Squam, Newfound, Sunapee, Winnepesaukee, and Winnisquam lakes.
- Dip-netting surveys were conducted to monitor spawning rainbow smelt presence, size, and age characteristics in tributaries to Cedar, Christine, Newfound, Pleasant (New London), Sunapee, and Winnepesaukee lakes.
- Stocked 63,260 (4,397 lbs.) and 59,596 (3,963 lbs.) landlocked salmon yearlings into 13 (FY 14) and 12 (FY 15) specifically managed lakes (such as Lake Winnepesaukee), respectively.



*Each June, in just one day, contracted helicopter services aerially stock some 50 remote ponds with "fingerling" (about 3 inches, or "finger length") brook trout raised in our hatcheries.*

### COLDWATER PROGRAM

- Aerially (helicopter) stocked 66,802 (552 lbs.) and 70,244 (594 lbs.) brook trout fingerlings into 48 (FY 14) and 47 (FY 15) remote ponds, respectively.
- As a partner in a 15-state effort to implement the Eastern Brook Trout Joint Venture's conservation action plan, 122 stream sites were surveyed in New Hampshire; 94 of these sites had self-sustaining populations of brook trout. This equates to over 11 kilometers of stream electro-fished. Over this period, partnerships between several conservation commissions, Trout

Unlimited chapters, and regional land protection groups have been established. These partnerships are invaluable in fostering localized protection, restoration, and outreach efforts for the conservation of riverine cold water fish species.

- Additionally, over 75 road stream crossings were evaluated to determine ability for upstream fish passage and geomorphic compatibility. Only 10.7% of the crossings provided upstream passage for all fish species and the same percentage were fully compatible to the stream's natural geomorphology.
- The Clean Water/Healthy Trout Project began in the Ammonoosuc River watershed of northern New Hampshire in the summer of 2014. This initiative assesses the habitat suitability of local streams to support brook trout, as well as other aquatic species, while engaging the community in stream stewardship. This region faces environmental pressures from resource extraction, second home development and climate change. The area depends heavily on the health of natural resources to support recreation, tourism, and the forest industry. From this work, restoration/preservation projects are identified and funding is sought for implementation in the future.

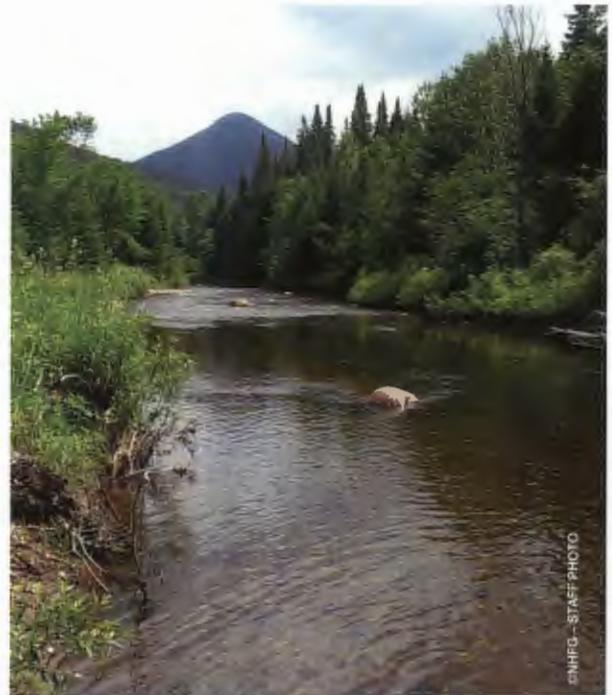
An integral part of this project is the connection among researchers, land-owners and municipal officials to promote informed stewardship of natural resources at the local level. This is a collaborative effort among four organizations: Ammonoosuc Chapter of Trout Unlimited; N.H. Fish and Game; Plymouth State University; and a local land conservancy, the Ammonoosuc Conservation Trust. During the summer of 2014, we studied the Ham Branch of the Gale River and some of its tributaries in Easton and Franconia, and Salmon Hole Brook in Sugar Hill. The outcomes for 2014 were:

- A total of 30,056 feet of stream assessed within the Ham Branch and Salmon Hole Brooks and some small tributaries;
- 14 different parcels surveyed;
- 13 culvert assessments performed;
- 3 conservation easements initiated.

## FISHERIES HABITAT PROGRAM

- In the Nash Stream watershed, replaced an impassable culvert; conducted restoration activities on 4.5 miles of Nash Stream, including additions of mobile wood and several large log jams; and added more wood to sections of two tributaries where wood was added in October 2012. Ongoing research will help determine how in-stream wood influences stream nutrient cycling.
- In the Connecticut Lakes Natural Area, two undersized culverts were removed and replaced with bridges and three other culverts on perennial streams were removed and the road retired.
- Provided technical assistance to Trout Unlimited for in-stream wood restoration projects in southern New Hampshire.

*Partnerships between several conservation commissions, Trout Unlimited chapters, and regional land protection groups... are invaluable in fostering localized protection, restoration, and outreach efforts for the conservation of riverine cold water fish species.*



*Nash Stream has been named one of the ten "Waters to Watch" in the U.S. by the National Fish Habitat Partnership, thanks to ongoing efforts to restore river processes and fish habitat.*

## INLAND FISHERIES DIVISION

### FISH CONSERVATION PROGRAM

- Collected fish data for a number of projects and partners, including the U.S. Fish and Wildlife Service (USFWS), the U.S. Forest Service, the N.H. Department of Environmental Services, and Trout Unlimited. Data from over 483 surveys was compiled into a statewide fish database.
- Bridle shiner (state threatened) distribution surveys were performed in Winnepesaukee Lake, Wentworth Lake, Suncook River, Isinglass River, Cochecho River, Jones Brook, Branch River, and Exeter River watersheds.
- Established index sites for monitoring American eel population trends in the Merrimack River watershed and partnered with the USFWS and Eversource, Inc. (formerly Public Service of New Hampshire) in a study of silver eel movement and survival during downstream migration.
- Transferred 46,000 river herring and 2,200 American shad into the upper Merrimack River watershed as part of the ongoing effort to restore anadromous fish runs to the watershed.

### WARMWATER PROGRAM

- Conducted a radio telemetry study on the Squam Lakes to examine largemouth and smallmouth bass movement after bass tournament weigh-in. A total of 33 bass were equipped with radio tags in August 2014, and movement was monitored during 2014 and 2015. This was a cooperative effort with the Department, N.H. B.A.S.S. Nation, and the Squam Lakes Association.



Fisheries Biologist Gabe Gries uses a radio-tagging antenna to track bass in Squam Lakes.

*Assessments of warmwater fish populations include determining species abundance, size and condition statistics, as well as age and growth parameters.*

Assessments of warmwater fish populations include determining species abundance, size and condition statistics, as well as age and growth parameters. During the biennium, warmwater fish population assessments were completed for Naticook Lake and Otter Lake. Surveys to evaluate young-of-the-year black bass were completed in 2013 and 2014 on the Connecticut River, Big Squam Lake, Forest Lake (Whitefield), Spofford Lake, and Lake Winnepesaukee. Highland Lake (Stoddard) and Contoocook Lake were surveyed

for black crappie and white perch. Black crappie scales were collected from 10 waterbodies for an age and growth study. Black bass tournament data were analyzed for 2009 and 2010. The black bass tournament database and warmwater fish database were updated and verified.

Staff continued to work with the N.H. Interscholastic Athletic Association to support the growth of fishing as a high school sport and assisted with four state-wide high school bass tournaments. Evaluations were performed on the Connecticut River (15-mile Falls Reservoirs) to investigate the potential for walleye introductions. Warmwater fish habitat structures were deployed in Harrisville Pond.

## FISH CULTURE PROGRAM

The Department's four major fish-production facilities are located in Berlin, Milford, New Hampton, and New Durham, and its two smaller facilities are in Twin Mountain and Warren. These six facilities produced and distributed fish needed for trout and salmon stocking programs throughout the state.

In FY 2014 and FY 2015, fish culturists produced 400,324 pounds of fish. They distributed 1.57 million fish in FY 2014 to meet management needs for trout and landlocked salmon. Numbers for 2015 were not available at the time of publication.

Yearling, two-year-old and brood fish trout were produced for put-and-take fisheries management throughout the state. Brook trout fingerlings were produced for put-grow-and-take fisheries management in remote trout ponds, most of which are stocked by helicopter. Landlocked salmon yearlings were produced for put-grow-and-take management in lakes managed for landlocked salmon. Mature adult trout were available because the Department maintains brood fish populations for brook trout and brown trout egg production, thus reducing disease risk from import. Surplus brood fish (3+ yr. olds) are stocked in many waters, which provide an exciting dimension to the state's trout fisheries, particularly ice fishing.

The excellent quality of trout and salmon produced at the hatcheries is the result of continued improvements in fish culture. These include improved diets, better fish health monitoring, improved fish culture techniques and hard work by fish culturists. The annual total costs for trout production were \$2,728,869 in FY 2014, and \$2,810,592 for FY 2015; cost of production was \$6.78/lb. of gain in FY 2014.

*The excellent quality of trout and salmon produced at the hatcheries is the result of continued improvements in fish culture.*

## END OF AN ERA FOR ATLANTIC SALMON RESTORATION PROGRAM

The biennium saw a long-standing fisheries restoration effort come to a close. In the fall of 2013, the U.S. Fish and Wildlife Service, facing federal budget cuts and stubbornly low annual returns of sea-run Atlantic salmon, announced that it was ending its investment in the more than 30-year-long Atlantic salmon restoration effort in the Merrimack River watershed.

This will also eventually bring an end to a unique angling opportunity in New Hampshire. Since 1993, anglers holding a special permit had enjoyed fishing for these big fish, weighing from 3 to 12 pounds, each spring and fall. A reduced number brood stock fish were released in the fall of 2014 and spring of 2015. The Atlantic salmon permits were discontinued in 2015.

Although the Atlantic salmon program is phasing out, work continues in New Hampshire to improve habitat and upstream fish passage for other migratory species, such as American eels, shad and river herring. The salmon stocked in recent years that are currently living out their life cycle will also benefit from these efforts.



*Big brood stock salmon were stocked into the Merrimack watershed in 2014 and 2015. Moving forward, it is uncertain how many fish will be available in the future and for how long.*

## LAW ENFORCEMENT DIVISION



*Above, Conservation Officer Roger Griswold stocking fish ca. 1965. Above right: during 2015, N.H. Conservation Officers wore a special silver commemorative badge in honor of the Department's 150th year.*

### MEETING THE ENFORCEMENT CHALLENGE

The Law Enforcement Division is responsible for enforcement of all laws and rules relating to fish, wildlife and marine resources. Conservation Officers also have the authority to enforce motor vehicle and criminal laws. These officers prosecute all of their own cases involving offenders and violators of these laws and rules. They have a statutory mandate to coordinate all search and rescue operations, conduct underwater recoveries, and enforce snowmobile and off-highway recreational vehicle (OHRV) regulations. The Division also is responsible for marine species enforcement, protecting our saltwater fisheries.

### FULFILLING SEARCH AND RESCUE RESPONSIBILITIES

During the biennium, the Law Enforcement Division participated in 398 Search and Rescue Missions involving hikers, climbers, snowmobilers, children, elderly people, and the recovery of people who drowned on New Hampshire's lakes and rivers. Following are highlights of some of the more notable search and rescue missions conducted:

- **December 2013:** Conservation Officers responded to King's Ravine Trail in the unincorporated town of Low 7 Burbank's Grant. Two Canadian hikers had planned a challenging hike during adverse winter conditions. They were unable to stay on the trail and found themselves caught above tree-line in extreme weather, exposed to the elements. They activated their emergency locator beacon notifying the emergency 9-1-1 system that they were in need of a rescue. Conservation Officers hiked up under dangerous conditions, found the two hikers and brought them out to safety.
- **December 2013:** Conservation Officers and volunteer search and rescue groups conducted an extensive two-day search taking them up and over the summit of Mt. Washington during extreme winter conditions. They were searching for a lone male hiker who was a day overdue from his planned arrival at the Appalachian Mountain Club Hostel in Pinkham Notch. Significant resources were required to conduct a complete search in a limited amount of time under extreme conditions. During a flight over the summit, Army National Guard helicopter crew members observed tracks in the snow leading down into the closed Dry River Trail area. Teams of searchers deployed for what proved to be a grueling overnight search. The hiker was located early the next morning in good condition.



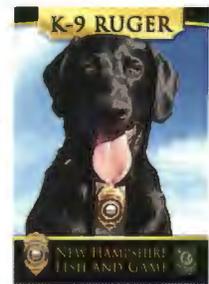
*Conservation Officers board an Army National Guard helicopter, for a flight over the summit of Mt. Washington during an extensive two-day search for a lost hiker in extreme winter conditions.*

- **July 2014:** A young boy who suffered with severe autism, and who had both mental and physical disorders, escaped from the vehicle he was riding with and his caregiver was unable to locate him in the woods. A Fish and Game K-9 team conducted a search of the area. The dog was able to find clothing the young had removed and left on the ground, but was unable to locate a track. There was concern that without his medication, the boy would not survive the night. Search teams took up positions based on where the K-9 had lost the track and began a close quarter line search using thermal imaging devices. They succeeded in finding the young boy later in the day and brought him out to safety.
- **October 2013:** Fish and Game Officers responded to reports of a missing teenage girl in Conway, N.H. This would become an intensive 12-day search that gained national attention. Fish and Game was assisted by personnel from Conway Police, N.H. State Police Troopers and Major Crime Unit, the Federal Bureau of Investigation (FBI) Team tasked with investigating crimes involving children, as well as hundreds of volunteers. Numerous line search missions, interviews and hasty searches were conducted, 24 hours a day, with intense media coverage and local communities supporting these efforts. Many months later, the young girl was located and discovered to have been a kidnapping victim.



CO Robert Mancini and his K-9 patrol partner "Ruger."

Informational cards were created for all three K-9s, with support from private sponsors and the Wildlife Heritage Foundation of N.H.



**Conservation K-9s**

N.H. Fish and Game Law Enforcement now has three trained and certified K-9 (canine) teams. These dogs and their handlers assist with tracking in search and rescue, evidence recovery for criminal investigations, and help other law enforcement agencies track suspects, both criminal offenders and fish and game law violators. Three Conservation Officers are devoted dog handlers who commit to countless hours training and caring for these dogs. The result of those efforts is K-9 teams that are admired and respected across the state.

**Operation Game Thief**

The Department's Operation Game Thief Program, an online and telephone hotline for reporting wildlife poachers, has been redesigned and updated. During the biennium, a small group of dedicated Conservation Officers created a new outreach program to promote more public awareness relating to wildlife crimes and how people can assist in bringing violators to justice. Through a grant from the Wildlife Heritage Foundation of New Hampshire, a new 16-foot enclosed trailer was purchased. Through support of sportsmen and women groups and the Foundation, this team created a visual interactive display to be used at shows and other events promoting Operation Game Thief and demonstrating successful efforts in enforcement of wildlife crimes.



Through support of sportsmen and the Wildlife Heritage Foundation of N.H., a new 16-foot enclosed trailer was purchased by Operation Game Thief, housing an interactive display for use at public events.

## LAW ENFORCEMENT DIVISION

### **Legislative Advances**

Legislative efforts during the biennium resulted in Conservation Officers being granted the legislative powers to enforce Motor Vehicle Laws under the Motor Vehicle Code. Conservation Officers now have full police enforcement powers statewide.

Law Enforcement also worked in conjunction with the Executive Director's Office to adopt administrative rules to address advances in technologies that, in the opinions of our sportsmen and women, negate the principles of fair chase. These advances include a ban on use of drones, the same-day use of live-action game cameras, and computer-controlled smart rifles for the taking of wildlife.



### **Hike Safe Card**

Voluntary Hike Safe Cards became available for the first time in January of 2015, at a cost of \$25 per person and \$35 per family. The response to the card was positive, with 1,914 cards sold at the close of the biennium, bringing in nearly \$50,000 in revenue. Proceeds go to the Search and Rescue Fund to help defray the cost of rescue activities. People who obtain the cards are not liable to repay rescue costs if they need to be rescued due to negligence, regardless of whether they are hiking, boating, cross country skiing, hunting, or engaging in any other outdoor activity. Individuals may still be liable for response expenses, however, if they are deemed to have recklessly or to have intentionally created a situation requiring an emergency response. People who possess a current N.H. Fish and Game hunting or fishing license, or a current registration for an off-highway recreational vehicle, snowmobile or boat, are already exempt from repaying rescue costs due to negligence under this law.

### **Dive Team Missions**

The dive team conducted 17 dive recovery missions during the biennium. In addition to responding to several reported drownings, this team also conducted numerous dive missions in an effort to recover valuable evidence to assist the New Hampshire State Police and local police departments with their criminal investigations. The dive team also recently transitioned into use of a new Hybrid Dry Suit to be utilized by members diving under adverse conditions. The Dive Team was also able to purchase a new dive boat with funding from a Wildlife Heritage Foundation of New Hampshire grant. This new vessel will provide an improved platform from which to perform underwater searches and increase safety for both divers and operators. The updated electronics on board will enhance the team's ability to take advantage of a more accurate search and mapping technique.



*The Fish and Game dive team conducted 17 missions during the biennium.*

### **Off-Highway Recreational Vehicle and Snowmobile Programs**

Several Off-Highway Recreational Vehicle (OHRV) and Snowmobile program changes occurred during the biennium. Among them, the issuance of registrations converted from an outdated paper system to an electronic agent-

based system that will allow for future expansion to a fully online product that mirrors the modernized department licensing system.

The OHRV and Snowmobile Digest of regulations transitioned from a simple pamphlet to the format used by the hunting, fishing and saltwater digests. This new format allowed for better communication and messaging to riding enthusiasts, all while reducing costs through paid advertisers.

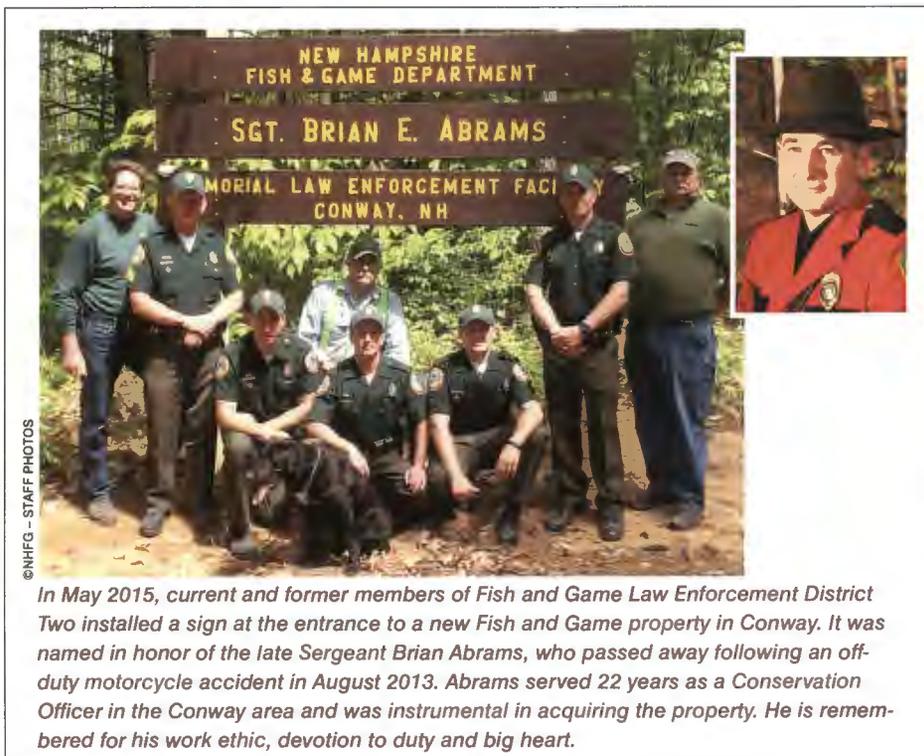
Significant OHRV trail development continued to occur in Coos County. Approximately 1,000 miles of interconnected trails and road systems have been developed. For the first time, certain state-owned roads as well as numerous town road systems have been opened to OHRV use. A new term, "UTV," was added to the law book to represent the side-by-side Utility Terrain Vehicles that have exponentially grown in sales and use in New Hampshire. Significant law enforcement, safety and educational challenges will need to be met in the years ahead.

Snowmobilers experienced two excellent snowy and cold winters during this period, resulting in encouraging registration numbers that exceeded 48,000 during the 2014/2015 winter. Overall, accident statistics remained fairly constant, with an overall average decrease in fatalities. Conservation Officers continued to support New Hampshire Snowmobile Association and Easter Seals "Camp Sno-Mo" fundraising efforts, which help ensure summer camp opportunities for children with a variety of physical and learning challenges.

In 2014, a combined OHRV and Snowmobile Online Safety Course option was added to augment the traditional classroom course. It was developed in response to strong constituent interest for an alternative electronic offering. In its first year, 1,205 students completed the free traditional course, while 401 students opted for the online course (which cost \$29.50). Total students certified over the two-year period exceeded 3,000.



Off-highway Recreational Vehicle education classes began being offered online, as well as in the classroom.



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In May 2015, current and former members of Fish and Game Law Enforcement District Two installed a sign at the entrance to a new Fish and Game property in Conway. It was named in honor of the late Sergeant Brian Abrams, who passed away following an off-duty motorcycle accident in August 2013. Abrams served 22 years as a Conservation Officer in the Conway area and was instrumental in acquiring the property. He is remembered for his work ethic, devotion to duty and big heart.



CO Chris Egan and Easter Seals representative Paxton Williams take a ride during the annual Easter Seals Ride-In fundraiser to benefit Camp Sno-Mo, a youth summer camp supported by the N.H. Snowmobile Association.

## PROTECTING COASTAL RESOURCES

The Marine Fisheries Division is responsible for managing and protecting the rich natural resources of the state's coast, harbors and estuaries. The Division manages and develops sampling programs for recreational and commercial marine species. It also oversees the Great Bay National Estuarine Research Reserve.



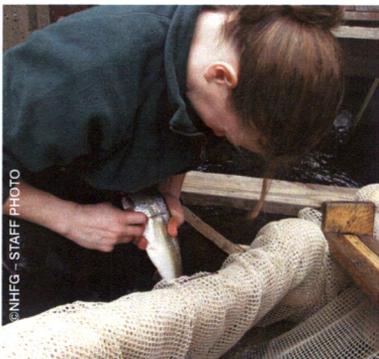
Former Marine Fisheries Chief John Nelson and current Chief Doug Grout prepare for a dive into coastal waters, ca. 1990s.

## RIVER HERRING

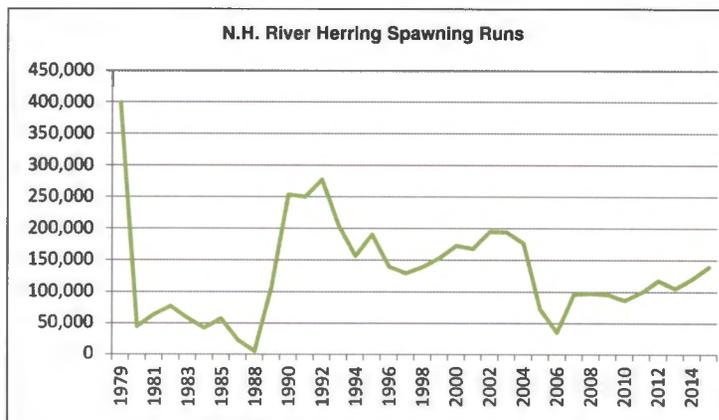
Successful efforts to restore access to habitat for anadromous fish in the Lamprey River of coastal New Hampshire have increased the access to 43 miles of freshwater spawning area through dam removals and fishway construction. However, a breached dam located at Wadleigh Falls exists and has never been objectively studied for the ability of river herring to pass. This study used electronic Passive Integrated Transponder (PIT) and radio tagging techniques during spawning migration to determine the ability of river herring to negotiate the potential barrier. Alewives were PIT tagged below the head-of-tide dam in Newmarket, N.H., and antennas were placed in the first two fish ladders on the river to produce measures of passage efficiency at each location and to determine the proportion

of fish entering the river. Fish captured at the second fish ladder on the Lamprey River were radio tagged and then transported and released in the area of the breached Wadleigh Falls Dam. Radio tagging data indicated that alewives were unable to pass the breached Wadleigh Falls Dam site and that it should currently be considered the uppermost extent of their migratory access. Results

also show that migrating fish reaching the location had a preference for the river-right channel over the river-left channel, although the left channel may provide greater opportunity for passage.



Marine Biologist Renee Zobel monitors river herring spawning runs.



## TRACKING EGG-BEARING LOBSTERS

The Marine Division conducted research to identify areas within New Hampshire state waters with large congregations of egg bearing female lobsters. Once these locations were identified, lobsters within these areas were tagged to determine movement patterns and habitat use. A total of 2,300 lobsters were tagged between June 2012 and November 2013. As of June 2014, harvesters have reported catching 682 (30%) of the lobsters that were tagged.

Preliminary analysis has shown most of the tagged lobsters appear to be moving south. Several lobster harvesters have reported catching lobsters off Gloucester, Massachusetts, and four lobsters traveled between 80 and 100 miles and were caught off Cape Cod. This project was partially funded through a grant from the Wildlife Heritage Foundation of New Hampshire, which provided nearly \$2,000 worth of tagging equipment.



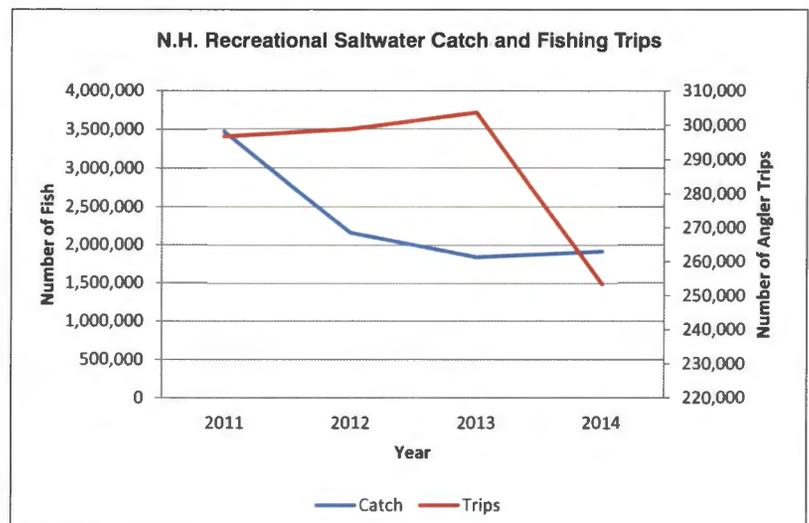
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As part of the tracking study, egg-bearing lobsters were tagged, using white streamer style T-bar tags inscribed with a unique tag number, a phone number and "NHFG."

## MONITORING MARINE COASTAL RESOURCES

- **Seven Department fishways** on six New Hampshire coastal rivers were operated each spring in 2014 and 2015 to facilitate the passage of river herring (alewife and blueback herring) and other diadromous fish, such as American shad, over dams. Estimated numbers of river herring using all coastal fish ladders in 2014 and 2015 has continued to generally increase since the low return years in 2005 and 2006. Despite stable returns during the last several years, New Hampshire's river herring return numbers are below average for the past 25 years. The Taylor and Oyster rivers continue to have low return numbers and exhibit signs that restoration problems may be resulting from downstream migration impediments during prolonged low-water conditions, poor water quality within the impoundments during emigration, or a combination of the two. River herring returns to the Cochecho and Exeter rivers continue to be relatively stable, while returns to the Lamprey River have been increasing. The Lamprey River returns over the last four years have been the highest since the construction of the fish ladder over 40 years ago, which may be due to access to more freshwater habitat with dam removals and fishway construction.
- The Marine Division also conducted a number of ongoing **fisheries independent monitoring programs** to evaluate relative abundance and collect biological data on over 100 different marine species in New Hampshire. The programs include: a juvenile finfish seine survey of New Hampshire estuaries; a cooperative Maine/New Hampshire inshore trawl survey of nearshore coastal waters from New Hampshire to the Maine/Canada border; population monitoring of juvenile American eels in certain New Hampshire coastal rivers; rainbow smelt spawning survey in Great Bay tributaries; and a survey of oysters in Great Bay estuary for annual growth, seeding, disease, and predation. Much of this information is used in periodic stock assessments and in fisheries management plans for some of these species.
- The Marine Division works with National Oceanic and Atmospheric Administration (NOAA) Fisheries to **develop estimates of catch and effort** in New Hampshire by marine recreational anglers as a part of a nationwide program called the Marine

*With concern over the health of the Gulf of Maine cod population, deep sea anglers are targeting haddock and pollock more heavily.*



## MARINE DIVISION

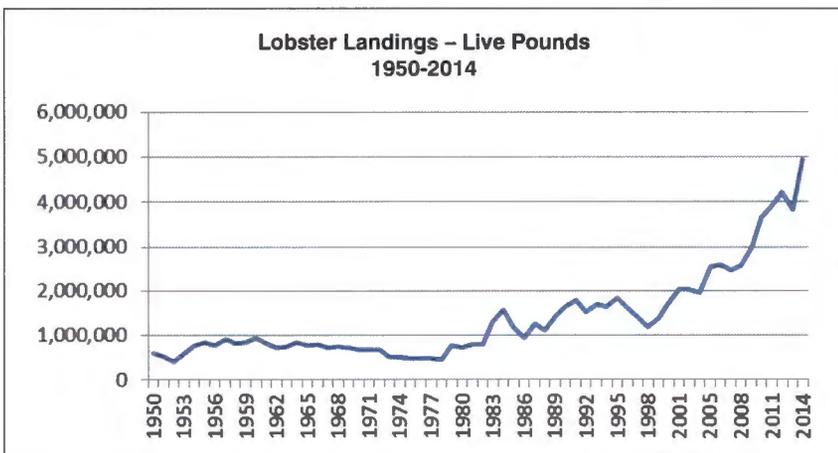


The Marine Division monitors lobster harvest and effort.

Recreational Information Program. During the biennium, Marine Division staff interviewed between 1,600 and 2,000 anglers each year about their catch. The estimated total saltwater fishing trips taken in New Hampshire has dropped from a high of 504,774 in 2005 to 253,548 trips taken in 2014. Atlantic mackerel, used for both food and as bait, was the number one harvested fish in 2013 and 2014. The harvest of 747,030 and 601,276 fish, respectively, were down from the previous two years. Pollock was the second most harvested fish in 2013 and 2014. During this biennium, pollock was at the highest harvest level since 2001, with 102,974 and 103,217 fish taken, respectively. Haddock was the third most recreationally harvested saltwater fish this biennium. Recreational anglers took 58,511 haddock in 2013 and in 2014 harvest increased to 82,727 fish. Haddock are part of a collective species commonly referred to as “groundfish” that includes other members of the cod family, such as Atlantic cod and pollock. There have been many regulatory changes for groundfish species in the past few years, shifting fishing pressure among these species. With concern over the health of the Gulf of Maine cod population, deep sea anglers are targeting haddock and pollock more heavily.

- The Marine Division **monitors commercial harvest** via mandatory logbooks for harvesters and reports from dealers. In addition, the catch is sampled by Department biologists for biological information at the docks and on board lobster boats. New Hampshire's commercial fishing ports have averaged over eight million pounds of seafood brought in by commercial harvesters valued at over 20 million dollars in the last three years. There is a diverse range of species represented in these commercial landings, which included 32 different species of fish and invertebrates landed in New Hampshire, valued at approximately 27 million dollars in 2014. In recent years, American lobster accounts for the largest portion of New Hampshire's commercial landings in both quantity and value. The 2014 lobster landings were the highest on record at approximately five million pounds that contributed 23 million dollars to the total commercial landings to New Hampshire ports. Pollock and Atlantic cod round out the top three most valuable commercial species, while spiny dogfish and Atlantic herring contribute to the top three in quantity the last two years.

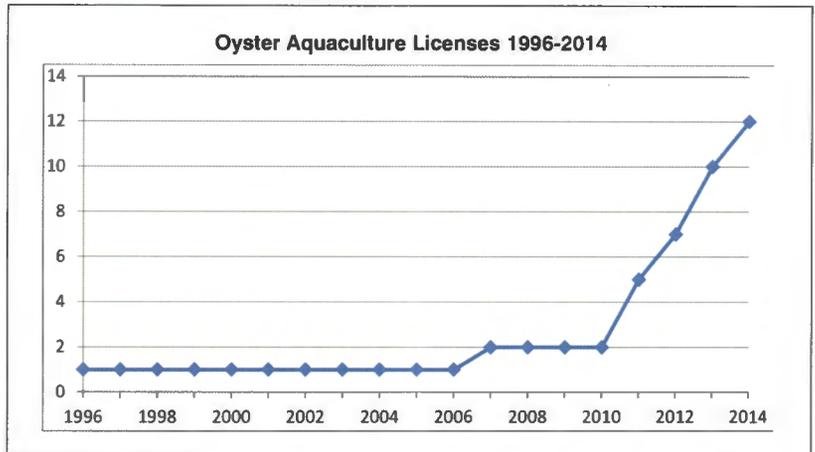
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- Additional fisheries-dependent monitoring of fisheries occurring in New Hampshire coastal and estuarine waters include catch and effort reports from permitted coastal harvesters, rainbow smelt winter angler fishery survey, and the volunteer striped bass angler survey.

## AQUACULTURE

Aquaculture in New Hampshire's coastal and estuarine waters (finfish, mussels, and oysters) has increased substantially over the last two years. The Marine Division licenses and monitors aquaculture along with New Hampshire Department of Environmental Services and Health and Human Services Division of Public Health. The largest aquaculture interest in New Hampshire has been oyster farming, where the total oysters harvested from aquaculture sites was 81,274 in 2013 and 153,660 in 2014.



## GROUNDFISH FISHERIES DISASTER DECLARATION

Despite harvester's adherence to catch limits over the past few years, several key groundfish stocks are not rebuilding. Low levels of these stocks have caused a significant loss of access to fishery resources, with revenue declines that have greatly affected the northeast commercial groundfish fishery. In September 2012, then-Acting Secretary of Commerce Rebecca Blank declared the Northeast multispecies groundfish fishery a commercial fishery failure at the requests of state governors. Congress appropriated \$32.8 million in federal fishery disaster funds to be allocated specifically to the Northeast Multispecies Groundfish Fishery. During the biennium, New Hampshire was awarded \$2,046,400 and worked with groundfish harvesters and businesses to develop a spending plan for these funds that address both the immediate needs and the long-term viability of its small boat groundfish fleet, for-hire fleet, and infrastructure.



New Hampshire was awarded \$2,046,400 in federal fisheries disaster funds, to benefit commercial groundfish harvesters.

## CLIMATE CHANGE

Climate change is expected to increase sea surface temperatures. Water temperature plays a vital role on many species in the Gulf of Maine and along New Hampshire's coastal waters. Increases in water temperatures may lead to significant shifts and/or expansions of species ranges and behavior. This has been evident in New Hampshire, with an increased presence of warm water marine species (i.e., longfin squid, black sea bass, and tautog) previously not endemic to the state that are now regularly targeted by anglers. Black sea bass have become so prevalent that in 2013 new rules were implemented in order to regulate and manage the newly developing fishery in the state (Fis 603.22). In the Gulf of Maine, the increasing water temperature is a factor that likely has and will continue to contribute to poor recruitment in both northern shrimp and rainbow smelt stocks. For the first time in over 30 years, poor conditions for the northern shrimp stock, largely influenced by environmental factors, led to a commercial fishery moratorium for both the 2014 and 2015 fishing seasons. As water temperature continues to increase, we can expect to observe more changes to the fisheries and ecosystem of New Hampshire's coastal waters.

*For the first time in over 30 years, poor conditions for the northern shrimp stock, largely influenced by environmental factors, led to a commercial fishery moratorium for both the 2014 and 2015 fishing seasons.*

## GREAT BAY NATIONAL ESTUARINE RESEARCH RESERVE

The Great Bay Estuary, often referred to as New Hampshire's hidden coast, is a complex embayment and the state's largest estuarine system. Fed by the tidal waters of the Piscataqua River, the estuary offers a variety of diverse habitats, including eelgrass beds, mudflats, salt marsh, rocky intertidal and upland forest and fields. Striped bass, bald eagles, osprey and a variety of rare, threatened and endangered species rely on this important ecosystem.

Once threatened by an oil refinery proposed by Aristotle Onassis in 1973, the Great Bay received significant attention and was federally designated as a National Estuarine Research Reserve in 1989. The Great Bay National Estuarine Research Reserve is a state-federal partnership that is managed by the New Hampshire Fish and Game Department. The National Oceanic and Atmospheric Administration designed the program to protect estuarine areas as platforms for long-term research that can inform coastal management and

as places to increase public awareness about these unique ecosystems. Working collaboratively, staff of the Reserve bring science-based information to critical decision makers in the watershed, educate the public about this important ecosystem and manage the natural resources within the boundary.

**Expanding our understanding of Great Bay:** The research program at the Great Bay National Estuarine Research Reserve focuses on understanding the structure and function of the Great Bay ecosystem and the effects of natural and human-induced changes. In collaboration with a variety of university, state, federal, and non-governmental partners, we manage monitoring programs and advance research initiatives that can guide stewardship and management activities within and beyond the Reserve. The Reserve's research and monitoring efforts focus on four themes: (1) water quality, (2) land use change, (3) biological communities, and (4) climate change. Long-term monitoring programs enable us to detect changes over time associated with each of the four themes, while short-term research projects focus on identifying and mitigating threats to habitats, species, and human communities in Great Bay and its watershed.

**Managing our natural resources wisely:** Upland development, invasive species, resource use, habitat alteration and climate change are the major drivers to ecological change in the Great Bay Estuary. The Reserve strives to protect the integrity of the estuarine system and its watershed by incorporating science and stewardship into management decisions that impact the natural resources. As a founding member of the Great Bay Resource Protection Partnership, the Reserve has taken a lead in land protection to reduce the ecological impacts of habitat fragmentation caused by development in the watershed. The Reserve has a management interest in 3,740 acres of uplands distributed over 71 parcels. Properties are managed to protect threatened species and sustain fish and wildlife populations in balance with human uses. Stewardship activities are structured experimentally, when possible, so that their outcomes



Birdwatching from the boardwalk at Great Bay Discovery Center. During the biennium, the Great Bay Stewards worked with the community to raise more than \$100,000 that will be used to help rebuild the boardwalk.

*The research program at the Great Bay National Estuarine Research Reserve focuses on understanding the Great Bay ecosystem and the effects of natural and human-induced changes.*

can be evaluated and used to guide management actions beyond Reserve properties. Key strategies include conserving undeveloped land, encouraging low impact development approaches, and controlling invasive species.

**Educating the next generation:** The Great Bay Discovery Center hosts a variety of educational programs throughout the year, designed to teach visitors about the unique natural and cultural resources of the Great Bay Estuary. These include a school program for children in grades 1-5, and several public programs for adults and children. Educator volunteers are essential to the success of these programs. A visitors center is open May through October to welcome the public and teach about natural and cultural history through exhibits and a touch tank. The Reserve also has a boardwalk that winds through the transition from upland habitat to the salt marsh; providing visitors a chance to experience Great Bay's beauty and students a chance to directly interact with estuarine habitats.

**Engaging in our communities:** Our physical presence in the towns of Greenland and Stratham gives us an anchor for engaging with the public. The Reserve has a "green" campus that features a solar roof, geothermal heating and cooling, composting toilets, porous pavement parking lot, native landscaping that features rain-barrels and rain gardens. Along with student and public education programs offered on topics as varied as installing rain gardens to edible wild plants, the reserve also has a targeted program to reach municipal decision makers. The Coastal Training Program provides science-based training and resources to state agencies, municipalities, and watershed and environmental organizations in the N.H. Coastal Watershed. The Reserve presents workshops and trainings to local coastal decision makers to address issues related to climate change, stormwater and wastewater management issues, habitat conservation and ecosystem services, and low impact development.

**SOLVING PROBLEMS TOGETHER**

Coastal New Hampshire is likely to experience warmer temperatures and increased flooding from storm events and sea level rise in the future. These changes have substantial implications for the Great Bay ecosystem, as species and habitats may shift in response to changes in temperature and water levels. In addition, cities and towns in the Great Bay watershed will be affected by increases in the magnitude and frequency of flood events due both to sea level rise and increased precipitation. The Great Bay National Estuarine Research Reserve uses its programs and its place in the community to advance our understanding of climate impacts and to use this information to think about how our natural resources and our communities can adapt to new conditions.

**Monitoring the change:** Great Bay Reserve's research and stewardship program is working to anticipate and assess ecological impacts due to climate and sea level change. Comprehensive mapping of salt marsh habitats,



*The Great Bay Discovery Center community garden project involved local residents.*

*The Coastal Training Program provides science-based training and resources to state agencies, municipalities, and watershed and environmental organizations in the N.H. Coastal Watershed.*



*Great Bay Reserve's research and stewardship program is working to anticipate and assess ecological impacts due to climate and sea level change.*



*As sea levels rise, the marsh at the water's edge will be drowned. Salt marshes have the capacity to migrate inland with a rising sea level, but much of the land that marshes could migrate to has been developed with roads, homes and businesses.*

along with distribution of tidal creeks, pools, and panes will allow us to track vegetative change and associated impacts in this habitat most immediately impacted by any change in sea level. The Reserve is also working with the University of New Hampshire's Jackson Estuarine Lab to place sediment elevation tables (SETs) in several salt marshes throughout the estuary. These instruments will allow scientists to measure future water levels in the marshes.

Establishment of long-term datasets of habitat characterization and other vertical control infrastructure allow Great Bay Reserve's lands to be a site-based living laboratory for research to further our understanding of our changing estuarine environment.

**Modeling the impact:** Salt marshes are naturally resilient to changes in temperature, salinity, and water level, but are limited by elevation and sediment supply. As sea levels rise, the marsh at the water's edge will be drowned. But under the right conditions, salt marshes have the capacity to migrate inland with a rising sea level. The problem in New Hampshire, as in many coastal areas, is that the same low and level land that marshes could migrate to has been developed with roads, homes and businesses.

The Sea Level Affecting Marshes Model (SLAMM) is a tool that models the processes that affect how coastal wetland systems naturally respond to sea level change over time and where natural and man-made barriers will inhibit these changes. This tool can help users visualize and understand how coastal wetland systems will likely shift and adapt over time under a range of projected sea level rise conditions. In 2014, the N.H. Fish and Game Department and Great Bay National Estuarine Research Reserve ran SLAMM for all of coastal New Hampshire using accurate, updated, local data. As a part of the project, partners worked with four communities – Hampton, Hampton Falls, Seabrook and Portsmouth – to explore how SLAMM can aid local decision-making.

The maps produced by the model can be used to support municipal and state decisions about citing future infrastructure, habitat restoration, land conservation, and the development of land use regulations (e.g., buffers and setbacks). Models do not provide definitive answers, but they can be powerful tools to encourage a dialogue about what the future might look like, and what actions we can take now to be proactive in achieving our conservation goals.

**Helping communities adapt to a new future:** As the reserve and its research partners start to understand the trends, and hone their abilities to predict the impacts related to climate change, we also work with the communities around Great Bay to make sure that they have the information and technical assistance needed to prepare for future conditions. The Coastal Training

Program has co-chaired the New Hampshire Coastal Adaptation Workgroup (CAW) since 2009. This coalition of 21 organizations collaborate to support communities in preparing for the impacts of climate change. CAW has supported 29 of the 42 communities in the Great Bay Estuary watershed with climate preparedness and adaptation efforts and led 12 workshops on the topic. In 2014 and 2015, the Reserve brought together experts, agencies, and communities for a full-day Climate Summit. The research and training staff at GBNERR have also been a part of several research projects that are bringing teams of scientists into communities like Exeter and Dover to do science-based vulnerability assessments and climate adaptation planning.

By integrating our programs and working with the surrounding communities, the Great Bay National Estuarine Research Reserve can bring science and solutions that will improve water quality and fish and wildlife habitat.

*The Reserve works with communities around Great Bay to make sure that they have the information and technical assistance needed to prepare for future conditions.*

## COMBATING INVASIVE PLANTS

During the biennium, individuals and communities across the state gained a new tool they can use to help fight invasive plants. A database at [wildnh.com/invasives](http://wildnh.com/invasives) allows you to see what invasive plants are taking hold in your town, and what actions are most important to take – and where they should be taken – to combat these alien invaders.

Invasive plants can cause significant ecological and economic damage. They are a leading threat to native biodiversity, impacting native fish and wildlife as the habitats and ecological processes to which they have adapted are disrupted. Invasive plant growth can deprive wildlife of essential food sources such as pollen, nectar, and seeds.

This will not be an easy battle. Invasive plants have creative mechanisms to spread to new areas and seeds that can stay viable in the soil, ready to shoot up again for as long as 50 years. Tenacious Japanese knotweed can send out underground runners up to 60 feet before resurfacing to start a new colony. Its shoots can even push through several inches of asphalt!

Invasive plants are a common focus of control and restoration projects, but can easily reestablish themselves from surrounding areas unless a landscape-scale strategic approach is taken to prioritize control projects. To help make this happen, N.H. Fish and Game, the Great Bay National Estuarine Research Reserve, and the N.H. Natural Heritage Bureau have teamed up with over 120 community members, natural resource managers and academics to develop a strategic prioritization plan for the control of upland, wetland and intertidal invasive plant species throughout the state.

The spread of invasive species throughout New Hampshire is likely to speed up with the warmer temperatures predicted with climate change. Only by working together on shared invasive plant “battles,” across differing land ownerships and political boundaries, can we effectively protect our native plants and wildlife habitat in years to come.



*Volunteers from the N.H. Surfrider Foundation helped wrest out invasive plants on the site of a new trail at Odiome Point State Park in Rye.*

*Only by working together on shared invasive plant “battles” across differing land ownerships and political boundaries, can we effectively protect our native plants and wildlife habitat in years to come.*

### CONNECTING WITH PEOPLE THROUGH OUTREACH AND EDUCATION

The Public Affairs Division communicates Department messages to the public using a variety of methods and provides skill-based training focused on safety and personal responsibility. The division's goal is to develop stewards that conserve our natural resources and promote broad financial support for Department programs. Division employees direct their efforts toward connecting people with wildlife through awareness, appreciation, participation and civic action.

Communications are accomplished through media relations, television and radio programming, e-mail newsletters and increasingly diverse electronic news and information at [wildnh.com](http://wildnh.com). Marketing campaigns are directed toward increasing participation in traditional outdoor sports. The division also assists in critical fundraising activities for the Nongame and Endangered Wildlife Program.

The Public Affairs Division helps the Department connect with constituents through direct mail and e-mail marketing efforts, events and workshops, branded merchandise, and, exhibit panels. Fish and Game materials and information are also delivered directly to large audiences at shows and fairs.

Public Affairs works to promote the N.H. Conservation and Heritage Moose License Plate and participates with the N.H. Travel Council to promote outdoor tourism. The biennium also brought an opportunity for supervisors to participate in updating the Department's Strategic Plan, with input from staff.

### MARKETING THE FISH AND GAME MESSAGE

The Information Unit supports outreach throughout the Department by providing news services, broadcast media, advertising and promotion, media relations, print publications, electronic newsletters, web design, social media support and marketing strategies.

More than 400 print publications were produced during the biennium, including brochures, regulation digests and exhibit panels, as well as design of digital graphics, logos and merchandise.

The Department's flagship publication *New Hampshire Wildlife Journal* magazine received national acclaim from the Association for Conservation Information (ACI) in 2014. Both years of the biennium, the N.H. Wildlife Calendar was one of the top two conservation calendars in the nation. Our publication used in elementary schools, Wild Times for Kids, was ranked #1 by ACI in 2014.

Fish and Game's website at [wildnh.com](http://wildnh.com) was redesigned in the spring of 2015, with support of a grant from the Wildlife Heritage Foundation of N.H., making it a mobile-friendly, go-to resource for hunters, anglers and conservationists. Sortable tables were added, and elements were revised throughout the



Uel Gardner editing a film ca. 1950. Gardner was a pioneer in multi-media outreach of Fish and Game messages.

*Fish and Game's website at [wildnh.com](http://wildnh.com) was redesigned in the spring of 2015, with support of a grant from the Wildlife Heritage Foundation of N.H., making it a mobile-friendly, go-to resource for hunters, anglers and conservationists.*

site to be more effective and compliant with federal and state web standards.

Integrated marketing campaigns were carried out to raise awareness of Fish and Game funding issues, the Nongame Program's 25th anniversary in 2014, the Department's new automated licensing system, promotion of the voluntary Hike Safe Card, and enhancing public participation in updating ten-year Game Management and Wildlife Action plans.

### **Broadcast Media Unit**

The Broadcast Media Unit of Public Affairs produced hunting, fishing and wildlife viewing programming to more than 2.4 million homes in the Boston-Manchester DMA (Demographic Market Area) over the biennium. The goal behind the programming is to educate, retain and recruit hunters and anglers, as well as build support from outdoor enthusiasts for the Department and its mission. The Department-produced "Granite State Outdoors" program aired on the 34 New Hampshire Community Access TV stations. "NH's WildSide," also produced by Fish and Game, airs on WBIN-TV out of Derry, reaching 2.4 million homes in the Boston-Manchester DMA; this program draws a weekly viewership of approximately 7,500 households, according to Nielsen Ratings. Finally, on the Department's YouTube Internet Channel, viewers watched over 550,000 minutes of Fish and Game programming over the biennium.



*The Department-produced "NH's WildSide" airs on WBIN-TV, reaching all of the 2.4 million homes in the Boston-Manchester demographic area; this program draws a weekly viewership of approximately 7,500 households.*

The Broadcast Media Unit is also responsible for providing media to support other Divisions and units within the Department. This effort included production of two educational videos – a Hunter Education law presentation and a Watershed Education video. These tools are used to explain the programs, as well as serve as teaching aids.

Additionally, the Broadcast Media Unit supported the Department's marketing efforts related to the new Hike Safe Card, along with ongoing support for recruitment and retention of hunters and anglers. Multiple commercials, which aired on radio and TV, were created to support this effort.

The Broadcast Media Unit also continues to distribute the long-running "Outdoor Almanac" radio show hosted by WTPL radio personality Peter St. James. This program is distributed to nine radio stations throughout the state, many which have affiliates that simulcast the program.

### **Like Us!**

Fish and Game continues to reach new audiences with an expanded social media presence. Some 32,000 people are reached by the Department's Facebook page, supported by an agency-wide Social Media Team coordinated by Public Affairs. Our Facebook page has gained 20,000 fans during the biennium. Social Media presence also expanded through communications via Twitter, Pinterest and YouTube videos. This reflects the continued evolution of how many people interact with the Department and other government agencies.



*Some 32,000 people are reached by the Department's Facebook page, supported by an agency-wide Social Media Team*

### **“Catch Your New Hampshire Monster”**

In spring of 2015, the Public Affairs division developed a dynamic marketing and promotion fishing campaign titled “Catch Your NH Monster!” Its intent was to raise awareness of New Hampshire’s diverse cold and warmwater fisheries. The campaign used social media, broadcast media, press releases and online news media to increase and encourage participation.

### **Happy 150th, N.H. Fish and Game!**

The Public Affairs Division spearheaded the Department’s observance of the 150th anniversary of the N.H. Fish and Game Department in 2015. In support of this project, the Department secured a grant from the N.H. Wildlife Heritage Foundation for an historian to research the Department’s history and create resource materials. Two special-edition 150th Anniversary commemorative firearms were produced by N.H. firearms manufacturers in support of the observance.

Also in honor of the anniversary, Public Affairs published a new section on the website, a commemorative issue of *N.H. Wildlife Journal* magazine (January/February 2015), a series of Facebook posts and a photography exhibit.

Discover WILD New Hampshire Day 2015 carried out the anniversary theme, featuring staff and volunteers in period costumes, a recreated hunting camp scene, and old-time Fish and Game trucks, boats and snowmobiles. The observance was a valuable reminder of the important difference the Department has made for the state’s natural resources since 1865.



*Fish and Game staff and volunteers donned period costumes to help carry out a 150th Anniversary theme for the 2015 Discover WILD New Hampshire Day.*

*The Department participated in six major outdoor recreation shows during the biennium, reaching more than 130,000 people within our statewide market.*

### **Advertising and Promotions**

Over the biennium, Public Affairs conducted comprehensive marketing and advertising aimed at reducing lapsed anglers and encouraging license renewal, along with marketing the Apprentice Hunting License. Strategies included a coordinated mix of press releases, Facebook posts, traditional and electronic media. Supporting these efforts were face-to-face events such as sporting shows, fairs and department-hosted seminars.

The Department coordinated 21 “Outdoor Adventure Talks” promoting participation in outdoor recreation. These seminars reached 1,416 participants.

Several large one-day events, coordinated by Public Affairs, allowed the Department to engage with the broader public. Two “Discover WILD New Hampshire Day” events reached 11,055 participants. In 2015, the Discover WILD event celebrated Fish and Game’s 150th anniversary and incorporated the Sporting Expo formerly held in the fall.

The Department participated in six major outdoor recreation shows during the biennium, reaching more than 130,000 people within our statewide market. Fish and Game also presented information at seven state fairs. Fish and Game exhibits were a popular attraction at these events, reaching more than 40,000 members of the public, and creating an important opportunity for the agency to reach non-traditional audiences.

### **Barry Conservation Camp**

Public Affairs coordinates facilities maintenance and improvements at Barry Conservation Camp, which provided summer programming in outdoor skills and conservation awareness to more than 430 boys and girls during the biennium. In addition, a total of 73 adults took part in the Wild Game Culinary Adventure, a program that helps hunters learn to prepare wild game dishes. These events were supported by volunteers, non-government organizations and the Wildlife Heritage Foundation of New Hampshire.



*Volunteer Shirley Johnson teaches meat cutting at Barry Conservation Camp's Wild Game Culinary Adventure.*

### **FY 2014 RBFF Partnership**

The Department partnered with the Recreational Boating and Fishing Foundation to implement a direct mail marketing program in the spring of 2014 to increase fishing license sales. The program targeted anglers who had not renewed their fishing licenses for at least one year and encouraged them to buy a fishing license. Nearly 20,000 post-cards were mailed to resident lapsed anglers, resulting in 1,441 lapsed anglers purchasing a fishing license, bringing in \$53,773 in license revenue.

## **PUBLIC AFFAIRS CONSERVATION EDUCATION UNIT**

The goal of New Hampshire Fish and Game's Conservation Education programs is to engage with residents and visitors through diverse education experiences in order to develop individuals who are knowledgeable about fish and wildlife, make decisions that benefit fish and wildlife, and spend time outdoors engaging with fish and wildlife with proper skills, safety and ethics. This is accomplished by collaborating with partners and volunteers to offer educational opportunities at every level on the stewardship pyramid to move people from awareness to actions and on to a lifestyle that values wildlife and the resources needed for healthy wildlife populations.

Conservation Education programs include Hunter Education, Wildlife Conservation Education, Angler Education, Becoming an Outdoors-Woman, Watershed Education, Wildlife Stewards and Wildlife Docents. Programs provide curriculum development and skills training for schools through teacher training and support services, a wide variety of outdoor skills, safety and ethics education as well as outreach programs that use exhibits and electronic media to reach a wide variety of public audiences.

The work of the Conservation Education Unit relies on strong partnerships and works with over 800 volunteers, most trained through formal instructor certification programs to deliver important conservation education programs across the state.

*Volunteer time is an in-kind match that brought in over \$1.6 million of Wildlife and Sportfish Restoration funds to support education programs during the biennium.*

*Conservation Education Unit relies on strong partnerships and works with over 800 volunteers to deliver important conservation education programs across the state.*



*A youngster tries his hand at the shotgun range during Owl Brook Hunter Education Center's annual open house.*

*During the biennium, the Hunter Education program ran 289 Hunter and Bowhunter Education Courses, certifying 8,001 hunters.*

### **Hunter Education**

The Hunter Education program provides high-quality ethics, safety and skill-based training for those who wish to hunt in New Hampshire. This training is provided through mandatory courses and the Owl Brook Hunter Education Center.

Hunter Education courses are required for anyone wanting to purchase a hunting license. These courses are delivered by 480 certified instructors. Registration for the public is done online. Options include an online course with a hands-on field day or traditional classroom-based courses.

Recruitment, Retention and Reactivation (R3) is a national initiative now being applied to New Hampshire's

Hunter Education programs. Targeted towards hunter development, these R3 activities include teaching advanced hunting skills, increasing participation, and engaging partners throughout the state to provide R3 opportunities in concert with the Department.

Fish and Game's Owl Brook Hunter Education Center in Holderness is a state-of-the-art facility with a classroom, shooting ranges, an indoor archery range, a map-and-compass course and a 15-station woodland archery range. Owl Brook operates year-round, offering free workshops to the public on advanced hunting skills, shooting sports and hunter education courses. Also offered are youth programs and an evening winter archery league.

Hunter Education also maintains a 25-station woodland archery range in Bear Brook State Park in Allenstown that is free and open for public use year round.

*During the biennium, the Hunter Education program ran 289 Hunter and Bowhunter Education Courses, certifying 8,001 hunters. In addition, over 700 people were certified for trapping through 24 mandatory Trapper Education courses.*

*Over 4,200 people attended workshops or events at the Owl Brook Hunter Education Center.*

### **AQUATIC RESOURCES EDUCATION PROGRAM**

Two main programs within the Aquatic Resources Education Program teach aquatic ecology, aquatic resources management and angler education. The Watershed Education Program (WEP) targets high school and middle school teachers and their students. Currently, 100 schools actively participate in this program. The Watershed Ecology Institute targets teachers and community leaders. The Let's Go Fishing Program typically reaches schoolchildren in grades 4-12 and also provides courses for the general public.

#### **Let's Go Fishing**

Free Let's Go Fishing (LGF) courses cover proper skills, ethics, safety and basic fish ecology for anyone wishing to fish in New Hampshire. Courses include basic fishing, fly-fishing, fly tying, saltwater fishing and ice fishing. In-school courses are delivered by teachers with field trip support from

volunteers. Public programs are offered statewide through various partnering organizations, local park and recreation departments and UNH Cooperative Extension. The program has 90 trained volunteer instructors who deliver full courses and assist at various events in the state.

The Let's Go Fishing Program provided support for the N.H. Interscholastic Athletic Association's (NHIAA) High School Bass Fishing Tournament during the biennium. The LGF Program offered participating students an educational seminar on black bass management, fishing with lead-free tackle, bass fishing tactics, safety and ethics during both years of the biennium. More than 40 schools participated each year, culminating with a statewide tournament.

R3 practices are also applied within angler education programs to recruit, retain and reactivate anglers.

*During the biennium, the Let's Go Fishing Program reached approximately 20,000 people through 136 courses and 25 events.*



*Successful anglers show off their catch at the 2013 NHIAA High School Bass Fishing Tournament.*

**Watershed Education**

The Watershed Education Program (WEP) focuses on fisheries habitat conservation and targets mostly high schools. Funded through a federal Aquatic Resources Education grant, WEP aligns itself with the N.H. Science Curriculum Frameworks and provides high-quality professional development for teachers. There are three main components to the WEP: monitoring macro-invertebrate and water quality; using ArcGIS technology to map, record, analyze and share watershed data; and assessing local stream or river fisheries habitat. The third component includes bringing trout and warmwater fish into the classroom curriculum. Schools can opt to participate in one or all three parts of the program, depending on the school's needs and grade level. Support for this program is provided either through a series of trainings or a one-week teacher's Watershed Ecology Institute offered in partnership with Keene State College.

*The Watershed Education Program presently serves over 100 schools, 80 teachers, and 2,400 students in every major watershed of the state.*

*The Watershed Education Program aligns itself with the N.H. Science Curriculum Frameworks and provides high-quality professional development for teachers.*

**Wildlife Education**

Wildlife Conservation Education provides high-quality professional development for teachers. A "train the trainer" model helps multiply the effect of each training, whereby one teacher can reach multiple classes of students each year. These teachers partner with the Department to deliver curriculum and best practices in conservation education strategies into classrooms statewide.

In addition, volunteer docents and Wildlife Stewards deliver presentations to the public and classrooms throughout New Hampshire. Programs include Project WILD, Growing up WILD, the Winter Severity Index, Math and Science Partnership (MSP), Wildlife Stewards, Wonders of Wildlife, and the Discovery Room. Strong partnerships are key to



*Wonders of Wildlife volunteers were honored for bringing conservation education programs directly into classrooms around the state.*

delivering programs. For example, the Math and Science Partnership is made up of the N.H. Environmental Educator Team (NHEET), which includes the National Forest Service, Project Learning Tree, Project WILD, Project HOME and Project WET from the Department of Environmental Services. Without these partnerships, delivering strong Department wildlife conservation education programs would not be possible.

One far-reaching initiative is the Math and Science Partnership, which recruits and trains teachers in specific school districts. This includes an annual one-week teachers' institute and multiple contacts and trainings sessions over a three-year period to help bring Project WILD and Project HOME to the classroom in a comprehensive K-8 approach aligning with N.H. curriculum frameworks and incorporating the National Conservation Education Strategies into wildlife conservation education in the classroom.

*60 teachers from multiple school districts were trained through Math Science Partnership activities during the biennium. The Growing up WILD program provided 9 workshops for 170 teachers.*



*BOW participants take aim during a basic archery course in 2013.*

### **Becoming an Outdoors-Woman**

The Department's Becoming an Outdoors-Woman (BOW) program targets women age 18 or older for workshops that teach outdoor skills – skills usually associated with hunting and fishing, but useful for many outdoor pursuits. Regular BOW fall and winter workshops use direct hands-on experiential learning techniques and are designed to remove barriers to participation women have faced over the years. Barriers include the difficulty of finding female role models for hunting and fishing, and lack of social support for learning the diverse skills needed to participate in hunting and fish-

ing activities with confidence and success.

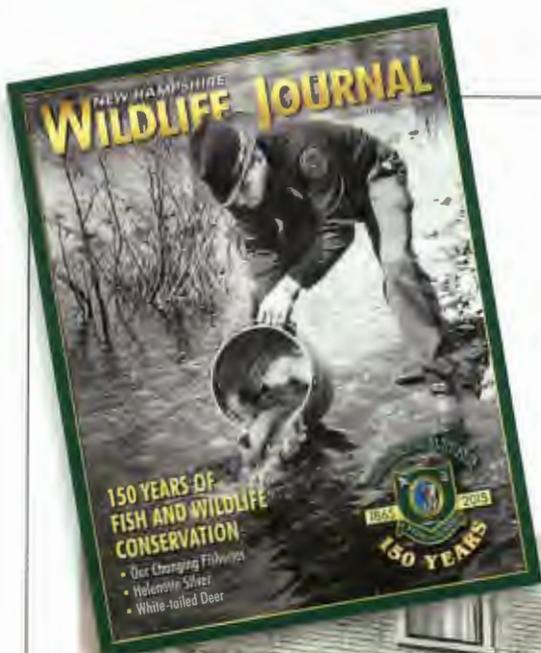
A variety of "Beyond BOW" workshops are also offered each year, providing more in-depth skills education for specific activities. During the biennium, these workshops included introduction to rifle and shotgun, turkey hunting, fly-tying and navigating in the outdoors.

*During the biennium, 530 women attended BOW and Beyond BOW Workshops.*

### **Barry Conservation Camp**

Barry Conservation Camp is a five-week conservation camp sponsored in partnership with the UNH Cooperative Extension 4H Program. Every summer, Hunter Education and Aquatic Resources Education staff support two specialty weeks focusing on hunting and fishing skills. The fishing week covers basic fishing and fly fishing. The Hunter Education week provides hunter certification and covers multiple shooting sports activities. Overall, Barry Camp provides opportunities for youth to learn skills related to fishing, hiking, camping, canoeing, hunting, shooting sports and wildlife conservation. Programs also include strong youth development activities for campers.

*A total of 155 campers attended the Fishing and Hunter Education weeks at Barry Conservation Camp during the biennium.*



Northern New Hampshire first became a favored territory for market hunters and sportsmen, reached with comparative ease, thanks to the railroad. There was no limit to the number of deer a hunter might legally kill, and tumbler camps, which had been springing up faster and faster since the middle of the 17th century, were led by day or version. (Other, 1997)

© Wharton Jackson, April/February 2015

# 150 YEARS

Conserving New Hampshire's Fish and Wildlife

THANKS TO FISH AND GAME, NEW HAMPSHIRE ENJOYS A LEGACY OF HEALTHY WILDLIFE AND OUTDOOR RECREATION JACK MOON

New Hampshire's fish and wildlife were once so abundant that fishing, hunting and trapping were allowed without limit. Catches and kills could be sold. Commercial fishermen netted salmon and shad on the Connecticut at Belknap Falls and on the Merrimack at Amoskang Falls and spared lake trout from Wampisquamsee, Sagam and Newfound. Woodland caribou, the Sumner golden trout and the Dublin Lake silver trout would persist into the 20th century.

By the mid-19th century, water-powered industrialism, along with overfishing, market hunting and over-trapping, in all but the wildest regions of the state, had reduced much of the former abundance of these natural resources to insignificance. In response, the legislature in 1865 created the Commission on Fisheries, primarily to restore the runs of salmon and shad. In the following years, growing enforcement and a gradual transition to science-based management led to the healthy fish and wildlife and opportunities for outdoor recreation we enjoy today.

Right up to the present day, the Fish and Game Department has faced the ongoing challenges of steady population growth, reduced public access to hunting and fishing, diminishing habitat, increased responsibilities added by the legislature. Unfortunately, funding for Fish and Game's mission has long fallen short.

### Competing Interests

In the Province of New Hampshire, the first legislative effort to protect either fisheries or wildlife came on March 17, 1741, with an act that banned deer hunting from January through July. That measure, along with others in the following decades, required trappers to register "their traps," who had legal authority to enter and inspect any property for evidence of deer taken out of season. During the open season, there were no restrictions on the number of deer that a hunter could kill, either for personal use or to sell.

James Barlet, writing in 1750, blamed the complete disappearance of Atlantic salmon from the Piscataqua watershed on the numerous sawmills in operation there and on the poisonous effects of yellow-legged sawdust. The blame, however, more likely rests on overfishing and on the mill dams across the Salmon Falls River and other Piscataqua tributaries.

In 1754, New Hampshire enacted its first protective law on fisheries. The shadfish runs up Cobscook Brook from the Merrimack River to Lake Umbagog had been blocked by mill dams, and local fishermen complained. At the time, shadfish made up only a small part of the commercial fisheries that homesteaded fishermen pursued each spring near Amoskang Falls. With dip nets and scoop nets in the three river tributaries at the falls, and with ocean seines downstream in more open water, they took away tons of fish, including salmon, shad, herring, striped bass and Atlantic sturgeon. A catch at the New water in Bedford in 1762 drew the claim that "at one haul of the net 2500 shad were taken."

The dilemma the legislature faced in 1754 was how best to preserve the jobs both of commercial fishermen and of mill dam owners. Their compromise legislation threatened mill dam owners with a loss of forty shillings if they failed to keep passageways open in their dams for the shadfish. In 1763, at the end of May, but limited the law's power to five years. No thought whatever was given to the thousands of fish that might be caught.

In honor of the 150th Anniversary of Fish and Game, Public Affairs published a commemorative issue of **N.H. Wildlife Journal** magazine and a series of historic Facebook posts. 2015 Discover Wild N.H. Day featured a photography exhibit, an historical display and a recreated 1870s hunting camp scene.



Fish and Game furbearer biologist Patrick Tate donned a hand-made mountain man costume to help carry out a 150th Anniversary theme for the 2015 Discover WILD New Hampshire Day.

## WILDLIFE DIVISION

### WORKING FOR WILDLIFE, WORKING FOR YOU

The Wildlife Division oversees management of the state's game, nongame and habitat programs.



*Bear and deer harvest ca. 1962. Today's science-based game management has led to healthy deer and bear populations.*

*The New Hampshire Game Management Plan 2016-2025 established population goals and objectives that will guide management efforts for the next decade.*

### GAME MANAGEMENT PROGRAMS

In addition to regional responsibilities, staff wildlife biologists are also members of the game management team and most serve as species project leaders and coordinate day-to-day activities associated with game species management programs. The project leaders and other members of the game management team ensure that the best available scientific information from population monitoring programs and harvest is used for species management. The game management team formulates season recommendations and other measures to enhance recreational opportunities while maintaining sustainable wildlife populations at desired levels. These

desired population levels are established through the game management planning process at 10-year intervals. This process involves significant public input and evaluation of public desires in addition to consideration of the current biological and social factors affecting species management. The plan was revised during this biennium and the "New Hampshire Game Management Plan 2016-2025" established population goals and objectives that will guide management efforts for the next decade. Species management program work is characterized by public input, professional peer review and analytical processes that demand knowledge of the species, the professional literature and the complex biological and social issues which characterize today's wildlife management activities.

### ANALYZING WILDLIFE DATA

Division data continue to be managed with a view toward efficient long-term development, use and storage. Significant amounts of survey, harvest and other data are collected, entered, verified and analyzed annually. Division staff works with the state's Department of Information Technology to maintain software and server compatibility, as well as data security and accessibility. Increasing use of Internet capabilities has provided the opportunity to collect a variety of data directly from the public. The Nongame Program's N.H. Wildlife Sightings project provides a mechanism to garner species distribution data for inclusion in the division's Comprehensive Wildlife Action Plan. The division has implemented an Internet-based turkey Winter Flock Survey and Summer Brood Survey to gather observation data from the public to aid in assessing

turkey distribution and productivity. With help from the Facilities Construction and Lands Division, the Wildlife Division has developed a system for tracking land acquisition and management activities, so that biologists and land managers will have the ability to document land management activities, retrieve information on properties and plan for the future. Geographic Information System (GIS) capabilities are provided through the Department of Information Technology. GIS provides the division and the rest of the Department with spatial analysis tools to supplement many program objectives. Major division efforts have included development and maintenance of up-to-date statewide habitat maps for use by state and municipal land planners, as well as the public. The division's biometrician continues to work with Department staff to ensure the highest quality and confidence possible in management information.

## GAME PROGRAMS

### **White-tailed Deer**

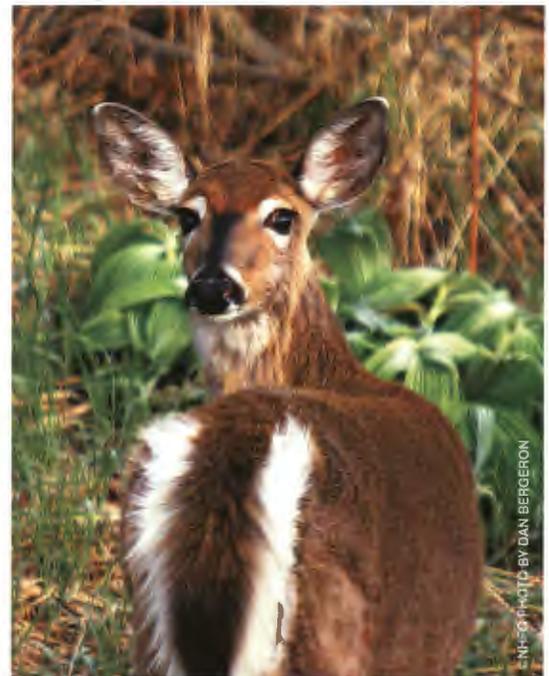
White-tailed deer continue to be a vital component of New Hampshire's environment, culture and economy. The most recent estimates from the U.S. Fish and Wildlife Service show that hunters contributed slightly over \$60 million to the state's economy in 2011, and deer continue to be the most sought-after of game species in the state. Wildlife watchers, photographers and others all recognize the contribution deer make to our quality of life.

The Department's 10-year Game Management Plan is set to expire at the end of 2015. Development of a new 10-year plan was begun in June of 2014 by the Department's Game Management Team, with revised population goals and objectives for the state's game species, including white-tailed deer. Objectives for the 2016-2025 plan call for the stabilization of the deer population in many portions of the state, as deer numbers in many management units have increased over the last 10 years. These objectives aim to maintain these populations well within the carrying capacity of the land and below the cultural carrying capacity of the state's residents.

Consecutive mild winters in 2011-12 and 2012-13 led to population increases throughout the state, resulting in increased either-sex hunting opportunities during the 2013 and 2014 seasons. The 2013 statewide harvest of 12,540 was the fourth highest on record since 1922, when comparable data is available. The statewide harvest during 2014 (11,396) declined slightly, but was still above the recent 5-year average and represented the ninth highest harvest on record.

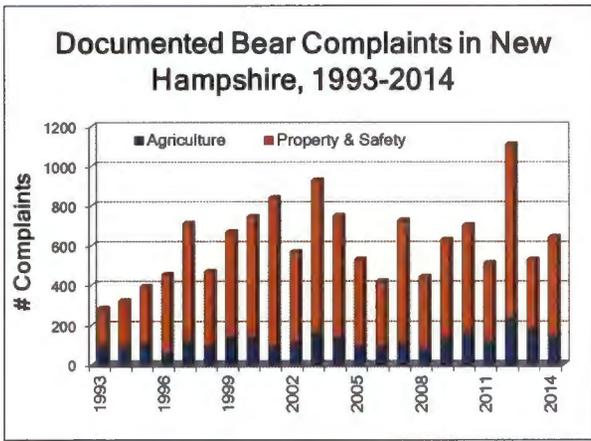
The spread of chronic wasting disease (CWD) to wild deer east of the Mississippi raised concerns in New Hampshire and other eastern states, and in 2002 the Department began a CWD monitoring and surveillance program. During the 2013 and 2014 deer seasons, 828 samples were collected for testing. Since 2002, a total of 5,199 samples have been collected and all have tested negative.

As deer in New Hampshire are near the northern limit of their range, information on the quality and quantity of Deer Wintering Areas (DWAs) in the



*Hunters contributed over \$60 million to the state's economy in 2011, and deer continue to be the most sought-after game species.*

state is vital to achieving long-term management objectives. In April of 2014, a cooperative research project with the University of New Hampshire was initiated which aims to improve the current understanding and documentation of deer wintering area (DWA) use in New Hampshire through a combined application of GIS mapping of field survey data, modeling of habitat components associated with DWAs to identify suitable habitat, and stable isotope analysis of fecal pellets to identify relative use of supplemental food. The Department will continue to pursue the achievement of deer management goals using the best available methods into the next biennium.



## Black Bears

New Hampshire's black bear population is more robust today than at any point in the state's history. More and more people of the state are enjoying this magnificent animal, both hunters and wildlife viewers alike. Over the past biennium, Fish and Game continued to improve bear management data collection, analysis and population modeling techniques while simultaneously reaching regional bear population goals. The current Big Game Management Plan, which covers the period 2006-2015, serves as the basis for all bear management decision-making. The overall population objective specified in the plan called for a statewide population of 5,200. The estimated New Hampshire bear population in 2015 of 5,300

was generally consistent with this objective, indicating that the Department has successfully achieved the stated objectives of the plan.

The Department has maintained a very active bear research component as part of the overall bear management program. This has allowed science-based decisions to be made on issues that would have been difficult to address in the absence of supporting data. The Department initiated seven bear research projects in the past 15 years. Over the biennium, research was completed on two studies which assessed the effectiveness of varied conflict abatement tools aimed at reducing human food attractants and/or bear-human conflict behavior (i.e., wildlife ordinances as a management tool, translocation of nuisance bears) and the success of rehabilitating orphaned cubs for subsequent release into the wild.

The Department, in conjunction with USDA Wildlife Services, continued to operate a bear conflict mitigation program over the biennium. This program provides technical assistance to the public on bear-human conflicts. This program has been instrumental in reaching out to a

large number of residents and visitors and helping them better understand bear behavior and educating them on ways to coexist with bears and avoid conflict. During recent years, including the past biennium, the number of reported bear/human conflicts has stabilized in New Hampshire. This cooperative bear conflict abatement program is believed to have had a significant influence on this trend.



*New Hampshire's black bear population is more robust today than at any point in the state's history.*

## Monitoring Moose

While New Hampshire's moose population has decreased in recent years, these changes are not affecting all parts of the state to a similar degree. During the biennium, of the six moose management regions, the population in two has increased slightly, is stable in one, and has decreased to varying degrees in three. While permit issuance has decreased, moose hunter success in 2013 and 2014 was 68%, nearly identical to the 10-year average of 69%. The moose population status is carefully monitored annually through surveys and data collected from harvested moose. The recently revised moose management plan covering 2016-2025 has established threshold population densities, below which permit issuance will be suspended. Major factors affecting moose mortality and productivity are currently being investigated.

An important mortality and productivity study, funded with Federal Aid funding matched by UNH, was initiated in the North Region in the winter of 2014. This study will provide critical management data regarding the rates and causes of mortality and productivity of moose in this region, how these are impacted by winter tick and how winter ticks are impacted by winter length. To date, 87 moose have been collared and it is hoped that an additional 90 will be captured in 2016-2017. Once collared, the moose are monitored year-round by UNH graduate students and their technicians. A similar study conducted from 2001-2006 proved that winter tick was the primary mortality factor for calves and the overall most important mortality factor for all age classes combined. Winter tick was negatively influencing productivity of adult cows, as well. The current study is designed to determine the current influence of winter tick on moose mortality and productivity and determine the precise weather factors that may in turn influence winter tick numbers.

The current study has documented an average winter tick spring mortality of 69% in calves, and 5% in adults during the springs of 2014 and 2015. While additional analysis is needed to compare and contrast the results of the two studies (2001-2006 to 2014-2015), initial analysis suggest winter tick mortality for calves during the most recent time period has been similar to the highest mortality rate for the initial study. In addition, early evidence from 2014 suggests that current productivity for adult cows is 21% below the 3-year average of the previous study.

What does this mean for moose in northern New Hampshire? Currently the moose population in the Connecticut Lakes region is stable, while moose in the North and White Mountain regions have seen two years of modest growth. Permits have been substantially reduced to compensate for the increasing mortality levels and decreasing productivity caused by winter tick. We know that shorter winters are beneficial for the ticks, but so, too, are higher moose densities. As our climate continues to change and our winters shorten, it is difficult to know what the future holds for New Hampshire moose. Is there an optimal moose density at which tick impacts could be reduced? Can we predict the weather patterns that cause higher than average tick-induced moose loss to help guide management actions? These are some of the questions that we hope to answer in the coming years.



*An important mortality and productivity study was initiated in the North Region in the winter of 2014, providing critical management data about how these animals are impacted by winter tick.*

*As our climate continues to change and our winters shorten, it is difficult to know what the future holds for New Hampshire moose.*



Carrying capacity for turkeys has now been reached, with turkeys found in every town in the state.

*Department staff and volunteers completed 42 ruffed grouse and 19 non-federal woodcock surveys during 2014 and 2015 to assess breeding activity and regional population densities.*



Data from the small game survey allows Fish and Game to successfully track select small game species like the Ruffed grouse.

## **Wild Turkey Population Goal Reached**

One goal in recent years was to reach a statewide population of 30,000 wild turkeys by the year 2015. This goal was reached and surpassed in 2014, with an estimate of 40,000. Carrying capacity for turkeys in the state has now been reached, with some turkeys in every town. The state's eight northern wildlife management units have an average of 2 turkeys per square mile, compared to 6 turkeys per square mile in the ten southern units.

The month-long spring gobbler season during May averages a harvest of 4,000 turkeys, and the fall season averages about 800 turkeys. There are approximately 20,000 turkey permits sold annually; about one-third of New Hampshire license holders hunt turkeys. The Youth Turkey Hunt on the weekend prior to the May 3rd regular season opening is very popular.

The wild turkey population is popular with the general public, with 65% indicating they "strongly like" turkeys, and 27% indicating they "like" turkeys. The public gives good assistance to the Department by providing turkey census information throughout the state. The Internet Winter Flock Survey has averaged 1,467 flock reports, totaling 23,500 turkeys. The Internet Summer Brood Survey has averaged 1,033 brood reports. Bird feeding provides important benefits to turkeys during deep winter snow cover periods, when natural turkey foods are scarce. During winter 2014, 78% of turkey flocks were reported at back-yard birdfeeders, and 77% were seen in that setting during the winter of 2015.

Two viruses have been present in the New Hampshire wild turkey population for four years, avian pox and Lympho-Proliferative Disease Virus (LPDV). However, to date, turkey losses have been minimal. Monitoring their prevalence throughout the state and the effects on the turkey population is one of the important tasks for which the Department is responsible.

## **Small Game and Pheasants**

Small game hunting serves as an important gateway into recreational hunting. Over the past biennium, Fish and Game has continued to improve data collection, assess user interest and preferences, and quantify hunter observations and activities through several surveys. Department staff and volunteers completed 42 ruffed grouse and 19 non-federal woodcock surveys during 2014 and 2015 to assess breeding activity and regional population densities. Volunteer small game hunter survey participants continue to provide important information on regional small game species distribution and abundance. Data from the Small Game Survey has allowed Fish and Game to successfully track select small game species, with the result being an improved basis for informed small game management decision-making. Our annual Small Game Harvest Summary serves as a valuable biological reference and an efficient means of disseminating project information to hunters, land managers and other small game stakeholders.

Fish and Game is working hard to increase our knowledge of ruffed grouse. During the biennium, 372 hunters submitted wings and tails from their

harvested birds and filled out a short survey. The samples provide us with age and sex composition, distribution data and a juvenile to adult female ratio to track annual productivity.

Pheasants are purchased with revenues derived from the sale of pheasant licenses. Of the \$26.00 fee, \$1.00 is retained by the agent and \$25.00 is available for the program. The number of pheasant licenses sold in 2013 was 5,123 and 5,159 were sold in 2014. During each year of the biennium, Fish and Game purchased 12,260 pheasants. The number of stocking sites (73) has remained constant. The number of birds released at each site averaged 140, with the exception of flood control areas, which received approximately 40 more birds per site. The majority (68%) of releases are still on privately owned land open to hunting. N.H. Fish and Game wildlife staff released birds at most of the sites, with the exception of sites in southwest New Hampshire (Sullivan and Cheshire Counties), where volunteers are enlisted.

### **Waterfowl Management**

Fish and Game conducts waterfowl management and research in coordination with the U.S. Fish and Wildlife Service, the Atlantic Flyway Council and the North American Waterfowl Management Plan, to meet goals and objectives established for Atlantic Flyway waterfowl populations. Annual waterfowl population surveys in New Hampshire include winter surveys in coastal and inland areas and surveys of statewide breeding populations in the spring.

Waterfowl banding provides critical survival and migration information that is used for management and research decisions. During the biennium, biologists captured and leg-banded 1,547 resident Canada geese and 1,351 ducks throughout the state as part of flyway monitoring efforts. In 2013 and 2014, liberal waterfowl seasons were offered as Atlantic Flyway duck and goose populations remained at high levels.

Waterfowl habitat management and protection continued during the biennium. The Great Bay Resource Protection Partnership received grants from both the North American Waterfowl Management Plan and the National Oceanic and Atmospheric Administration to protect habitat in the Great Bay area. These grants are being used to purchase critical waterfowl habitats on Great Bay and along major tributaries of the bay. To date, the partnership has successfully protected nearly 10,000 acres of habitat. Statewide management activities included the annual maintenance of more than 500 wood duck nest boxes at Department Wildlife Management Areas.

### **Furbearers**

During the biennium, trapping continued to play a significant role in the management of New Hampshire's furbearers. During the 2013-2014 trapping season, 561 trapping licenses were sold, while 567 licenses were sold during 2014-2015. Beaver trappers played a particularly significant role in reducing or mitigating conflicts with humans by trapping 2,123 beaver during the 2013-2014 season and 1,905 in 2014-2015.

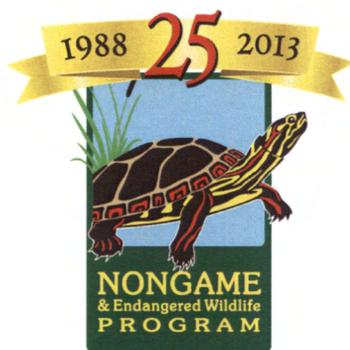


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## WILDLIFE DIVISION

*Animal Damage Control is a cooperative program between N.H. Fish and Game and USDA Wildlife Services. Since initiated in 1986, the program has responded to over 43,000 requests.*



*Working with partners and volunteers, this once-small program has transformed into a full-fledged conservation leader.*

The Bobcat Research Project, in which we partnered with the University of New Hampshire, came to a close during the biennium. New Hampshire trappers put their unique skills to use by live-trapping 19 bobcats that were subsequently fitted with telemetry collars for the study. Bobcats were found to use an array of habitats and features, with the current statewide population estimated at 1,400 to 2,200 animals.

### **Animal Damage Control**

The Animal Damage Control program is a cooperative program entering its 30th year between N.H. Fish and Game and USDA Wildlife Services. It combines state and federal expertise, resources and personnel to resolve wildlife conflicts for New Hampshire citizens. Assistance is provided through recommendations, evaluations, educational materials, site visits, formal assessments, material distribution and referrals to private-sector specialists. The program responded to more than 3,700 requests for assistance during this biennium, including 289 site visits and the distribution of 3,355 information leaflets. Since initiated in 1986, the program has responded to over 43,000 requests.

Staff also participated in monitoring for disease concerns such as chronic wasting disease, tularemia and LPDV (turkey pox virus) by taking biological samples for testing. Additionally, staff assisted with state and federal recovery efforts for threatened and endangered species, such as piping plovers and upland sandpipers.

Backyard poultry operations have experienced rapid growth statewide in recent years, which has increased the need for technical and operational responses by this program, particularly when bear damage is involved.

### **NONGAME AND ENDANGERED WILDLIFE**

Funding for the Nongame Program comes from private donations that are matched up to \$50,000 by state funds. The program qualified for the full state match during this biennium, thanks to the continued support of generous contributors. Additional funding comes in part from Conservation License Plate proceeds and federal grants. Partnerships with Federal, state and private conservation groups continue to be key to the Nongame Program's success, as staff works on current projects and plans future initiatives. Working with these partners and volunteers, this once-small program has transformed into a full-fledged conservation operation, leading the way with a statewide coalition of partners dedicated to improving wildlife and habitat.

The year 2013 marked the 25th Anniversary of Fish and Game's Nongame and Endangered Wildlife Program. The many supporters of the program gathered in Concord for a dinner and awards ceremony to recognize the people who have helped make the program successful in its continuing efforts to restore endangered wildlife and protect wildlife diversity. Additionally, the Governor and Executive Council issued a special proclamation and recognized staff, partners and volunteers.

In 2014 and 2015, Fish and Game began the process, in concert with partners statewide, of updating New Hampshire's Wildlife Action Plan to set priorities for conserving nongame and endangered wildlife in New Hampshire from 2016-2026. The comprehensive process involved assessment of species and a series of public input meetings with stakeholders.

**During the biennium, on-going Nongame projects included:**

- Releasing 26 captive-bred **New England cottontail rabbits** back to the wild in New Hampshire and restoring more than 750 acres of habitat in support of the range-wide recovery of this state-endangered species.
- Completing a five-state research, monitoring, and conservation planning effort to secure a more certain future for the state-endangered **Blanding's turtle**. In the final analysis, biologists determined that nearly half of the remaining Northeast population of this rare turtle lives in the Granite state.
- Continuing captive rearing and releases of **Karner blue butterflies** to supplement the growing wild population. In 2014, a total of 971 Karner blue butterflies were released in the Concord Pine Barrens and 2,600 eggs were collected for rearing and stocking in 2015.
- Protecting **upland sandpiper** nests by working with airport operations and maintenance staff at Pease International Airport. In July and August of the 2014 season, surveys verified that 11 fledglings had survived and were ready to attempt their first migration to wintering habitats in South America.
- Monitoring **pine marten**, a state-threatened species that lives in spruce-fir forests in the northern part of the state, to help determine what habitats marten are using and areas that connect the highest-quality habitats.
- Protecting 460 acres of **high-priority habitat** in Hooksett, which includes extensive hemlock-hardwood-pine forest, an exemplary Appalachian oak-pine forest, combined with over 76 acres of wetlands, 43 vernal pools and three perennial streams. Bear-Paw Regional Greenways, a local land trust, now owns the property and N.H. Fish and Game holds a conservation easement.
- **Collaborating with 35 towns to protect or enhance wildlife habitat** by developing natural resource inventories, conservation plans, town forest management plans and engaging citizens in local conservation as part of the Taking Action for Wildlife program, conducted with UNH Cooperative Extension.



*Biologists working on updating the Wildlife Action Plan tour a conservation area. The Plan has helped Fish and Game and its many partners protect over 235,000 acres of wildlife habitat.*



*Nongame biologist Brett Ferry releases a New England cottontail rabbit into the wild.*

**HABITAT MANAGEMENT PROGRAMS**

Fish and Game's technical assistance, UNH Cooperative Extension, waterfowl and upland habitat programs continue to conserve and restore New Hampshire's wildlife habitats. These programs receive much-needed funding from the Wildlife Habitat Account, with revenue from a \$2.50 fee paid by all who purchase a hunting license.

### Technical Assistance

The Small Grants Program, funded by the Wildlife Habitat Account, provides grants to reimburse landowners for the costs of approved habitat restoration projects such as releasing apple trees, mowing grasslands, restoring old fields, enhancing shrub-lands and young forests, and other improvements. As a condition of receiving grant funds, landowners agree to leave their land open for public hunting, fishing, and wildlife watching. Since its inception in 2000, 846 grants totaling \$847,041 have been awarded, resulting in improved habitat on over 6,000 acres and nearly 400,000 acres being kept open for public, wildlife-based recreation. Over the last biennium, regional biologists reviewed 39 habitat improvement projects on private lands in 34 towns, including 9 of New Hampshire's 10 counties.

N.H. Fish and Game has been providing technical assistance to landowners since 1947,

when biologist Tudor Richards provided advice to US Forest Service foresters on how to enhance deer wintering areas (DWAs) on the White Mountain National Forest. Biologist Carl Strong, Richard's successor, extended Fish and Game's reach to both public and private lands in the North Country, influencing management on tens of thousands of acres lands over a 30-year career. This work carries on today, but the scope has broadened considerably. Biologists still meet with landowners and provide them recommendations on how to enhance habitat, but from an early emphasis on DWAs, biologists now provide assistance on everything from moose to marten and woodcock to warblers. The technical assistance project has reviewed hundreds of cutting proposals impacting more than 1 million acres of industrial forestland over the years. During the last biennium, regional biologists reviewed a total of 113 timber harvests on 32 large ownerships in northern New Hampshire.

The demand for technical assistance on wildlife issues has grown substantially. In addition to providing assistance to both public and private landowners on particular forest or habitat management projects, Fish and Game biologists are also often called upon to participate in the development of management plans for federal, state, and private landowners. Management plans outline recommended actions on properties over a 10-20 year timeframe, including forest and habitat management, and recreation management. Over the biennium, Fish and Game biologists assisted National Wildlife Refuge planners and managers with the development of Refuge Comprehensive Conservation Plans (CCP) for both the Silvio Conte National Fish and Wildlife Refuge and the Great Bay National Wildlife Refuge. Biologists also assisted with management plan development for the 40,000-acre Nash Stream State Forest and the nearly 1,000-acre Fall Mountain State Forest, in addition to several private lands on which Fish and Game holds conservation easements.



*The wildlife habitat account provides funding to help sustain Wildlife Management Areas (WMAs) throughout the state. The program mows about 125 acres of grasslands and old fields on WMAs and other state-owned lands each year.*

*Fish and Game biologists are often called upon to participate in the development of management plans for federal, state, and private landowners.*

**State Lands Management**

The Fish and Game Department owns 89 Wildlife Management Areas (WMAs) encompassing nearly 52,000 acres. The primary purpose of these lands is to protect and improve habitat for wildlife to maintain the state's native biodiversity. We meet this mission by assessing the habitats on our WMAs and restoring or improving them using a variety of techniques, including brush mowing, timber harvesting, water level management, and shrub planting.

During the biennium, WMAs were actively managed to enhance wildlife food and cover with timber harvests at eight WMAs, bringing in nearly \$275,000 in revenue; field mowing at 33 state properties maintained 243 acres for wild turkey, deer, grassland birds and other wildlife; more than 20 acres of plantings were completed; four undersized culverts were replaced with bridges to deter erosion and improve stream connectivity for aquatic wildlife including brook trout; and agricultural agreements were renewed on four WMAs.

Hunting, fishing, trapping and wildlife watching are rich traditions and integral parts of New Hampshire's culture and heritage. N.H. Fish and Game supports, encourages, preserves and manages these traditional uses on its lands. Over the biennium, twelve visitor information kiosks were installed at ten WMAs, twenty-one WMA signs were built and installed, three parking areas built, and descriptions and maps of over 40 WMAs were added to the Department's online guide ([wildnh.com/maps/wma.html](http://wildnh.com/maps/wma.html)) to facilitate public use of WMAs. Additionally, 57 miles of boundary lines were maintained on six WMAs, and eight gates were installed at eight WMAs to control illegal access and inappropriate activities such as dumping and partying.

The Department pursues opportunities to add lands containing significant wildlife habitats to our inventory of WMAs and easement lands, primarily using federal funds. During the biennium, one new WMA was created in Stark and land was added to four existing WMAs. The Wildlife Division continues to work with partners such as The Nature Conservancy, BearPaw Regional Greenways, the Town of Canterbury and the Great Bay Resource Protection Partnership to conserve important fish and wildlife habitat and provide public access to those resources. In the past two years, we have conserved more than 2,280 acres. With the help of these partners, the Department has expended \$781,350 of Wildlife Restoration Program funds from the U.S. Fish and Wildlife Service to conserve land valued at \$2,448,800.



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*Timber is harvested on the Dumpling Brook Wildlife Management Area. The WMA has a new parking lot and sign.*



©NHFG - STAFF PHOTO

*Twelve information kiosks were installed at Wildlife Management Areas, like this one at Bellamy River WMA.*

*In the past two years, N.H. Fish and Game has conserved more than 2,280 acres of wildlife habitat.*

### **UNH Cooperative Extension**

Through a partnership between Fish and Game and UNH Cooperative Extension, the Extension Wildlife Specialist provides education to natural resource professionals, private landowners and community decision-makers. Cooperative Extension offers wildlife workshops and technical assistance to communities, conservation groups and landowners. Over the biennium, 38 municipal and private landowners were provided technical assistance on habitat management issues on over 5,000 acres of land, while 21 workshops were held that reached nearly 500 natural resource professionals, landowners, and community leaders.

*Over the biennium,  
43 new N.H. Coverts  
Project volunteers  
were trained.*

The Coverts Project trains volunteers during an annual 3.5 day workshop to promote wildlife habitat conservation and forest stewardship. N.H. Fish and Game is the lead sponsor of the program, with additional support from N.H. Division of Forests and Lands, the US Fish and Wildlife Service State Wildlife Grants Program, and the Quality Deer Management Association. Over the biennium, 43 new N.H. Coverts Project volunteers were trained. They join another 329 Coverts volunteers active in the state, who together in 2013 contributed over 20,900 hours of service on behalf of wildlife habitat in their communities (valued at over \$450,000). Coverts volunteers are involved in a number of activities, including leading field walks or giving presentations on wildlife-related issues, habitat management planning on lands they own or manage, and helping communities and land trusts identify and conserve lands important to wildlife.

## LOOKING AHEAD

This biennium has given us a chance to celebrate 150 years of fish and wildlife conservation in New Hampshire. Since the first New Hampshire Fisheries Commission was established in 1865, N.H. Fish and Game has developed into an effective modern Department. Looking to the future, it is critical that New Hampshire citizens remain vigilant stewards of our natural world. A strong Fish and Game Department with secure funding sources is essential for meeting the challenges ahead.



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*Back to the Future: Left, fisheries personnel in the early 1930s stocked milk cans full of trout to satisfy a growing interest in fishing. Below, Fisheries Program Supervisor Scott Decker, dressed in period costume, poses with a vintage Fish and Game vehicle during the 2015 Discover WILD New Hampshire Day celebration of the Department's 150th anniversary. Today, nearly a million trout are stocked annually in the Granite State.*



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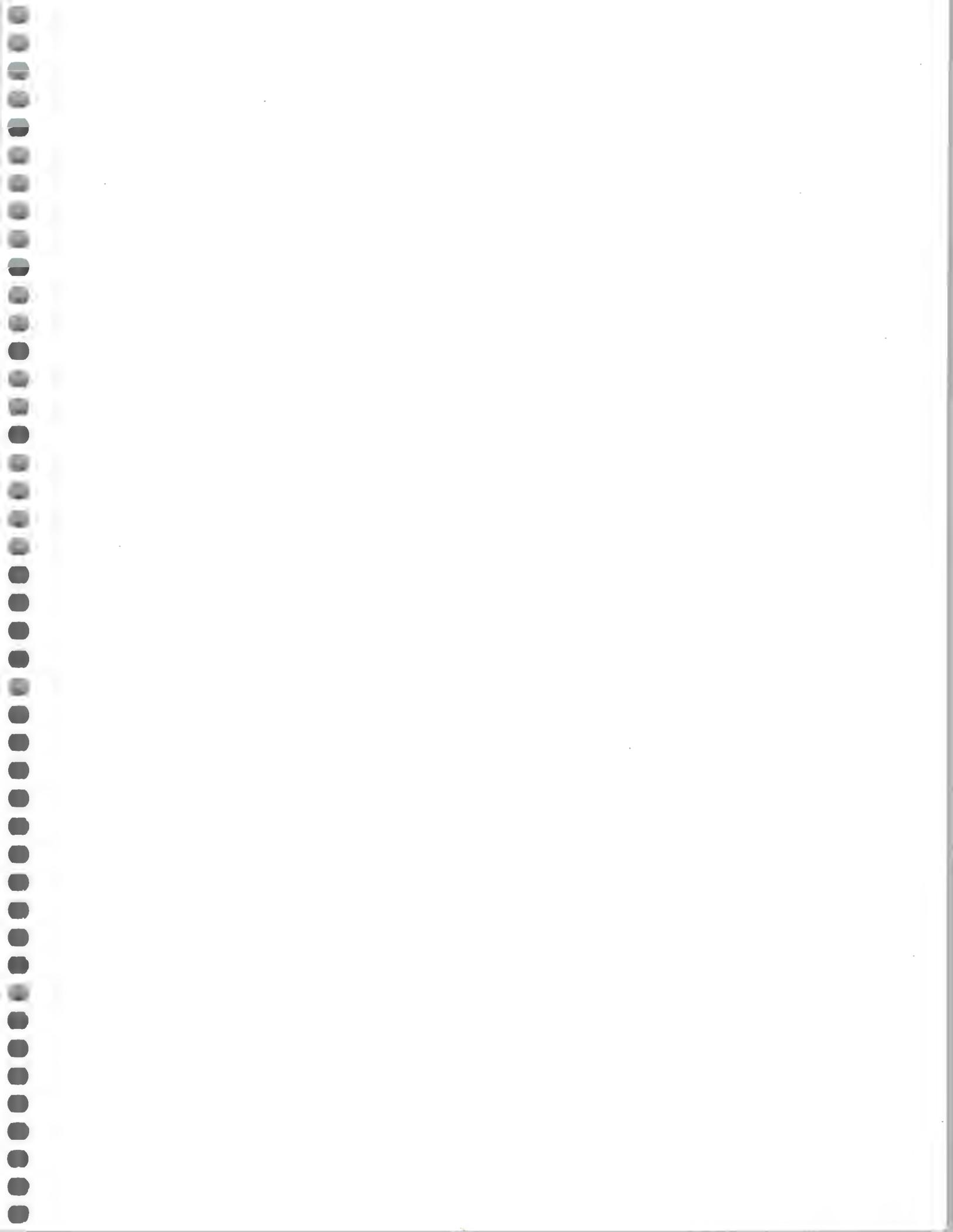
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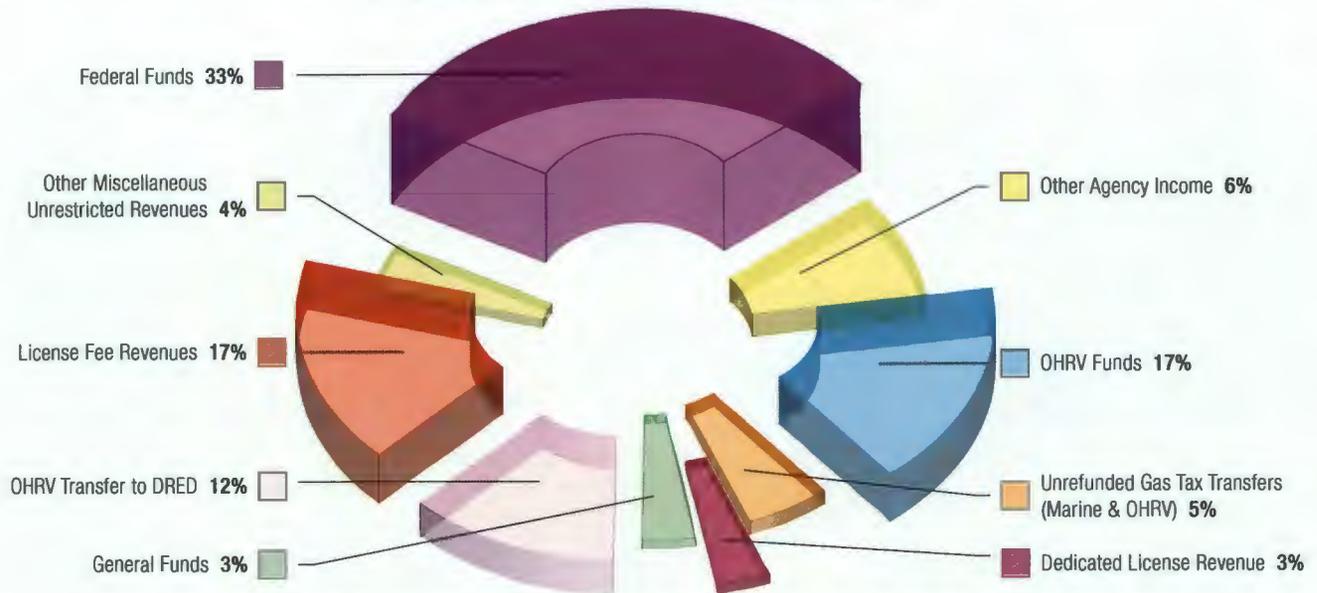


# A COMPLEX FUNDING PICTURE

The New Hampshire Fish and Game Department uses revenue from fishing and hunting license fees, federal funds, state general funds and other sources to accomplish its broad mission to serve the people and wildlife of New Hampshire.

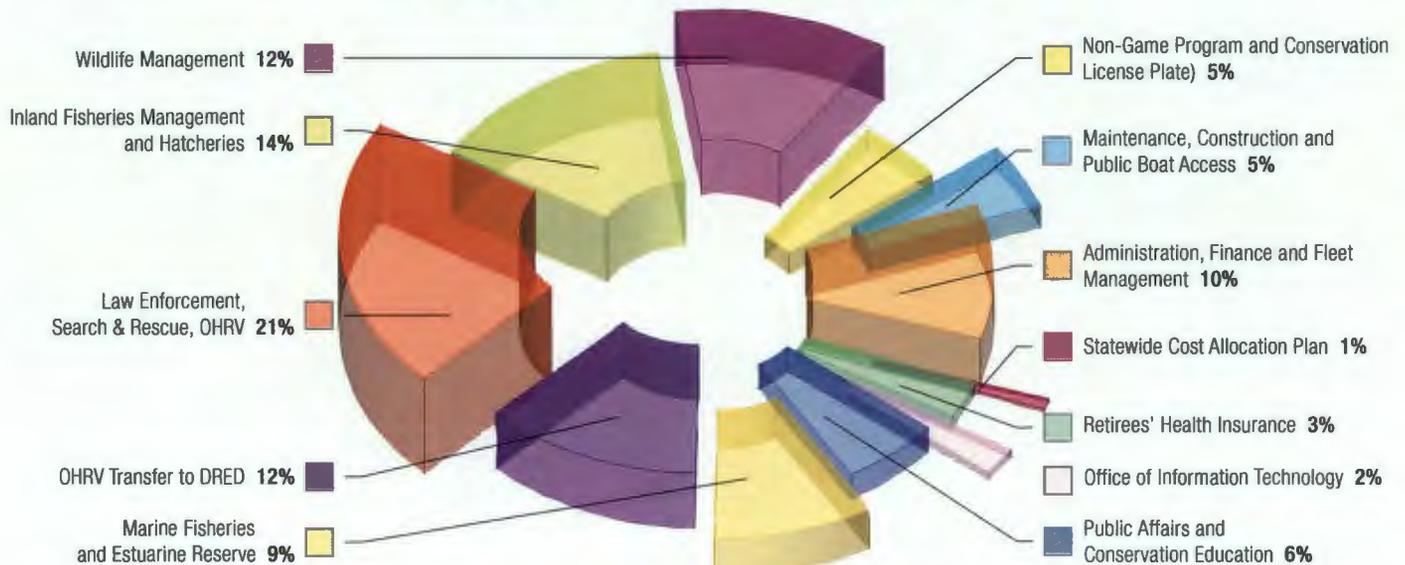
## WHERE THE MONEY COMES FROM...

TOTAL REVENUES (FY 2015): \$29,545,795



## WHERE THE MONEY GOES...

TOTAL EXPENDITURES (FY 2015): \$29,545,795



**License Fee Revenue:** Includes all resident and nonresident fishing and hunting licenses received for Fiscal Year 2015.

**Other Miscellaneous Unrestricted Revenues:** Includes court and license agent fines and penalties, sales of surplus property, miscellaneous sales and interest earnings. Actual receipts of miscellaneous unrestricted revenues were \$1,033,143. The remaining balance of \$372,849 to fund total expenditures was taken from the surplus in the Fish and Game Fund.

**Total Expenditures of the Fish and Game fund for Fiscal Year 2015** per year-end Monthly Statement of Appropriation by Office is \$29,545,795. Included within this amount is \$693,377 of inter-fund expenditure reimbursements. Net result of expenditures for fiscal year 2015 is \$28,852,418.

**Other Agency Income:** \$5 Boat surcharge - \$591,306; \$1 Search and Rescue surcharge on boat, OHRV and snowmobile registrations - \$199,783; Nongame donations and program income - \$131,845; Conservation License Plate Funds - \$318,391; Wildlife Heritage Foundation Grant Funds - \$109,850; Miscellaneous donations and income - \$415,995.

**Federal Funds:** Sport Fish Restoration Act (Dingell-Johnson and the Wallop-Breaux Amendment) for inland fisheries management, boat access and aquatic resources education - \$3,619,265; Wildlife Restoration Act (Pittman-Robertson) for wildlife management and hunter education - \$3,378,992; State Wildlife Grants - \$1,065,371; National Oceanic and Atmospheric Administration for marine fisheries management, the Great Bay National Estuarine Research Reserve program and marine law enforcement - \$1,939,617.

