

Fish & Wildlife Department Performance Based Budget - FY2016

“What makes Vermont special?” Many residents and visitors alike would say it is the state’s small villages, open, undeveloped landscapes and the beauty, nature, and wildlife associated with the forests and farms that make up the tapestry of Vermont. These attributes, including the fish, wildlife, plants and their habitats, are central to Vermonters’ quality of life. Our abundant natural heritage belongs to all Vermonters and the Vermont Fish & Wildlife Department has been entrusted to steward these valuable resources for the enjoyment of current and future generations.

But this is a commitment we should never take for granted. While Vermont’s wild species depend on undeveloped forests, farms and fields to thrive, Vermont has been developing its landscape in the 21st century at a rate faster than the state of New Jersey. We are converting an area of wildlife habitat the size of Montpelier to development – parking lots, buildings, roads – every year.

The Department balances its activities and priorities to conserve Vermont’s diverse habitats and to manage the species that live within. This report illustrates both the breadth and the depth of our work, from acquiring important forests and wetlands, managing game and fish populations, working with landowners, educating children and the public, to enforcing fish and wildlife laws, and working with our partners throughout the state to maintain the full spectrum of fish and wildlife species and their habitats for all Vermonters.

Vermont’s outdoor culture comprises many interests. Better known are our hunting, fishing, and trapping traditions, which date back to colonial times and not only serve as sources of recreation and food but also are key components of maintaining many species populations. Vermont is second only to Alaska in participation in wildlife-related recreation. However, many Vermonters are also keen wildlife observers, with the state ranking first in the nation for participation in wildlife watching.

These activities promote a connection to the outdoors and a commitment to conservation that is the envy of many other states. Promoting, enforcing, and monitoring the laws around species conservation is critical to the mission of the Department and helps us to maintain our status as a state with a thriving outdoor heritage.

However in the last decade, a shortfall has grown between the historic sources of funding the Department has relied on and the increasing demands to steward this public trust. Due to the scope of the Department’s mission, conservation can no longer be funded by sportsmen and women alone. The state has recognized the significant return on investment, both intangible and in revenues, of conservation to the state’s economy and quality of life. As such, the legislature has supported these important Department activities with General Fund dollars. These funds have allowed the Department to restore many of their critical functions as well as become more effective and efficient.

Recent research suggests that all Vermonters benefit from protecting nature. As pressures on species and habitats increase, the Department’s role in the protection of our natural infrastructure of water, soils, forests, and wildlife will continue to be foundational to a healthy economy and the quality of life that most Vermonters value. We hope you will enjoy reading this report and witnessing the good work the Department has accomplished to meet these needs in 2014, along with our goals for the year ahead.



Department Overview

Pages 1 - 6

Measuring Success

Pages 7 - 25

Revenues & Expenditures

Pages 26 - 27

Public Benefits

Pages 28 - 30

F & W Accomplishments

Pages 31 - 35

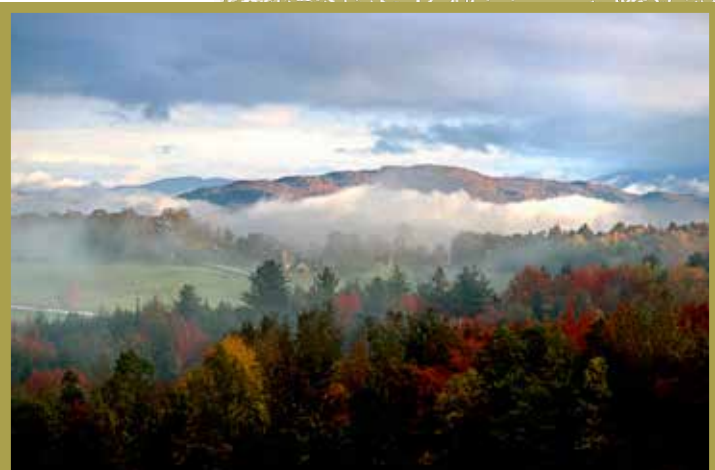
*Conserving fish, wildlife and
plants and their habitats for
the people of Vermont.*

Department Overview



Administration

The Administration Division provides policy, legal, planning, personnel, and financial management leadership for the Department. It is responsible for the oversight, production, distribution, and sales of all hunting and fishing licenses and more than 15 other permit types related to resource protection. The Administration manages \$8+ million in federal grant dollars, ensuring funds are spent appropriately and all reporting requirements are met. This aspect of the Department provides critical leadership and maintains compliance with business practices and procedures as follows:



- ◆ Oversees the sale of 200,000 hunting, fishing and trapping licenses through 280+ agents statewide and operates an on-line license sales system 24/7. The licensing group handles sales totaling more than \$6 million dollars annually.
- ◆ Administers the sale of more than 55 types of state licenses and permits.
- ◆ Administers more than 40 federal grants for the Department to receive over \$8 million dollars in federal funds annually.
- ◆ Operates two lotteries and an auction awarding between 10,000 and 21,000 permits to the public generating more than \$250,000 annually in Department revenues.
- ◆ Awards approximately \$1 million dollars of “grants out” to municipalities, conservation organizations and colleges and universities.
- ◆ Administers payroll and the VTTHR program for 140 state employees. Tracks the work effort of 400 volunteers and donated services totaling an estimated \$400,000 in in-kind donations.
- ◆ Coordinates the work of three state Committees or Boards (Fish and Wildlife Regulatory Board, Endangered Species Advisory Committee, Waterfowl Advisory Committee).
- ◆ Promulgates rules and regulations via Commissioner’s Rule, Fish and Wildlife Board Rules, Endangered Species Listings and works with the legislature on fish and wildlife–related legislation.
- ◆ Ensures that budget and operational priorities effectively advance the mission, goals and objectives of the Department’s Strategic Plan.
- ◆ Coordinates fish and wildlife policy and program issues with other state and federal agencies.



Law Enforcement

The Law Enforcement Division provides an essential component of fish and wildlife conservation and management— enforcement of Vermont’s fish and wildlife laws and regulations related to the protection of these resources for the benefit of all Vermonters. The current force of 36 District Game Wardens is the sole law enforcement entity monitoring more than 150,000 licensed people participating in hunting, fishing, and trapping activities. They detect and respond to fish and wildlife violations, requests involving conflicts with fish and wildlife resources, search and rescue operations, as well as offer many additional forms of law enforcement assistance to citizens and other law enforcement agencies. They provides a visible and important interface between the Department and the public.



- ◆ Game wardens answer approximately 8,000 complaints a year related to fish and wildlife violations and public service requests.
- ◆ As certified law enforcement officers, game wardens often provide assistance to other police agencies.
- ◆ Incidental to core duties, game wardens provide law enforcement for boating, snowmobile, and ATV regulations.
- ◆ Game wardens play an essential role in supporting all other divisions of the Department by participating in education programs, collecting biological data, and stocking fish.
- ◆ Game wardens also respond to human/wildlife conflicts, animal damage intervention, removal of big game animals from roadsides, and rabid animal calls all to protect human health and safety.



Wildlife

The Wildlife Division provides the science and action to protect and manage all wildlife, plants, and their habitats throughout Vermont. Division staff engage in three main areas of work: wildlife management and conservation of species that are hunted or trapped; public and private lands habitat management and protection; and maintaining wildlife diversity which includes the conservation of all native species including plants, natural communities, and rare, threatened, and endangered species. The diversity of job duties is immense and accomplished with 28 permanent wildlife scientists and 10 seasonal employees.



- ◆ Provides technical assistance, data, information, planning and outreach to towns, hunters, landowners, school children, the general public, and natural resources professionals to ensure the conservation of all wildlife in Vermont for future generations.
- ◆ Conducts research in support of species and habitat conservation and management actions.
- ◆ Protects, monitors and manages 619 and 217 plant and animal species respectively that are rare, threatened or endangered.
- ◆ Prepares harvest recommendations for hunting on four big-game species, six small-game species, three species of geese and up to 25 species of ducks, along with trapping and hunting of 14 different furbearers.
- ◆ Participates in the protection of critical wildlife habitat through regulatory processes such as Act 250 and Act 248 (Public Service Board).
- ◆ Participates in land acquisition and management of 133,000 acres on the Department's 89 Wildlife Management Areas (WMAs).
- ◆ Monitors wildlife diseases and the importation of wildlife into Vermont.



Outreach and Education

The principal duty of the Outreach and Education Division is providing quality information and education about Vermont's fish and wildlife resources. The Outreach and Education Division is the primary voice of the Department in supporting its mission and accomplishments, as well as the recruitment and retention tool for anglers, hunters, and trappers.

- ◆ Provides conservation education to 1,000+ children per year in two Conservation Camps, including a week for children of active military servicemen. Certifies nearly 5,000 students per year through 380 active volunteer hunter safety instructors in 230+ classes per year.
- ◆ Reaches nearly 6,000 Vermonters annually with the Let's Go Fishing Program through individual clinics, Conservation Camps, and outreach events. Volunteer instructors teach nearly 3,500 kids. Clinics are now offered at state parks by trained State Park Interpreters throughout the summer.
- ◆ Develops and manages special events, including the annual Ice Fishing Festival, and new Getting Started in Hunting training seminars open to the public throughout the year.
- ◆ Provides communications planning and media assistance to biological staff and administration on key Department initiatives and places more than 150 news releases and many PSAs annually in state and regional media. Partners with WCAX to produce regular "Wildlife Watch" segments seen by approximately 60,000 Vermonters weekly.
- ◆ Maintains website, Facebook pages and Twitter feeds; produces annual law digest and F&W calendar, develops major publications such as the Landowners Guide to Habitat Management, and provides critical information to the Department's core constituents and the general public.
- ◆ For teachers and educators: Conducts a week-long course related to wildlife and fisheries management and conservation; provides Project WILD certification and its associated programs throughout the year to formal, non-formal, and pre-service educators statewide.
- ◆ Develops fundraising initiatives for the Department, including Nongame Wildlife Fund promotion, live Moose Permit Lottery, three new Conservation License Plates, the new Habitat Stamp, the GMCC endowment fund, and two semiannual lotteries for online license purchases.
- ◆ Develops and installs educational interpretive displays in the Department's Kehoe Education Center and works to develop similar public educational resources for Department facilities, including the upcoming Dead Creek Center.



Fish Management

The Fish Division is composed of the Fish Management Section and Fish Culture Section (Hatcheries). The primary duty of the Fish Management Section is the conservation and management of all fish and fish habitats throughout Vermont. In a 2011 national survey, Vermont had 207,000 anglers who fished a total of 2.22 million days. The economic impact of sport fishing in Vermont was estimated to be \$147.1 million in retail sales. Fishing provided Vermont with over 2,420 jobs that generated \$73.2 million in salaries and wages, \$16.0 million in state and local tax revenues and \$17.1 million in federal tax revenues.



Staff members are engaged in a wide variety of activities, such as research, management, restoration, regulation, and education in the following ways:

- ◆ Conserves and restores fish habitat including protecting water quality, restoring stream buffers, and removing barriers to fish passage.
- ◆ Provides a variety of regulated and sustainable fishing opportunities.
- ◆ Provides angler access to public waters, including maintaining over 180 Fishing Access Areas statewide.
- ◆ Participates in sea lamprey control on Lake Champlain.
- ◆ Controls the introduction and spread of aquatic nuisance species and fish pathogens.
- ◆ Develops and implements restoration plans for species such as walleye, muskie, lake trout, salmon, and lake sturgeon.
- ◆ Monitors populations of fish species and their habitats.
- ◆ Collects information from anglers regarding their fishing success, recreational preferences, and factors affecting their satisfaction levels.
- ◆ Cooperates in the research, management, and restoration of fish communities in the Lake Champlain, Connecticut River, St. Francis and Hudson River Basins.
- ◆ Evaluates current and prepares new fishing regulations.
- ◆ Participates in the protection of critical aquatic habitat through regulatory processes such as Act 250, Act 248, FERC hydropower relicensing, and stream alteration permit review.
- ◆ Protects fish health and monitors for fish diseases at state hatcheries, private hatcheries, imported live fish shipments, and in wild fish populations.
- ◆ Coordinates fish stocking with the five state fish hatcheries (see Fish Hatcheries section for details)



Fish Hatcheries

As previously indicated, fishing has an enormous economic impact in Vermont, and fish hatcheries play an important role in supporting this activity. In 2011 the annual economic effect of the five state fish hatcheries was conservatively estimated at more than \$31.6 million per year. The hatchery program stocks approximately 2 million fish annually in public waters for recreational angling and fish restoration. With an overall cost of approximately \$3.3 million in 2014, the fish culture program yields almost a 9:1 return on investment. This is a bargain for Vermont since almost half of the costs of the hatchery program are covered by federal funds.



- ◆ The hatcheries support the Children's Fishing Program, which partners with almost 70 organizations statewide annually to provide more than 6,000 children, as well as elderly and challenged individuals an opportunity to experience and learn about fishing.
- ◆ The hatcheries are a destination site and host 10,000 to 20,000 visitors annually.
- ◆ The hatchery program also supports the fish health program and its laboratory. The role of this program is to prevent the introduction of exotic fish species and pathogens, and control and limit the distribution of existing pathogens to the waters of the state through actual fish diagnostic work and numerous permitting programs (e.g., importation, propagation, and so forth).
- ◆ The hatchery program is part of the Cooperative Nursery Program. This program involves sports groups directly by providing fish to enhance Department fishing programs providing approximately 192,000 fish weighing 7,700 pounds, while promoting mutual understanding. Currently there are five groups participating.
- ◆ The hatchery program also provides trout and salmon eggs for the Trout/Salmon in the Classroom program. This program cooperates with Vermont Trout Unlimited to provide trout and salmon eggs and technical assistance to 22 schools in Vermont. School groups incubate and hatch the eggs in the classroom, reviewing a number of lessons in environmental conservation (i.e. water quality, fish biology, among others), and release the trout/salmon into specific rivers or streams near their school.



Measuring Success

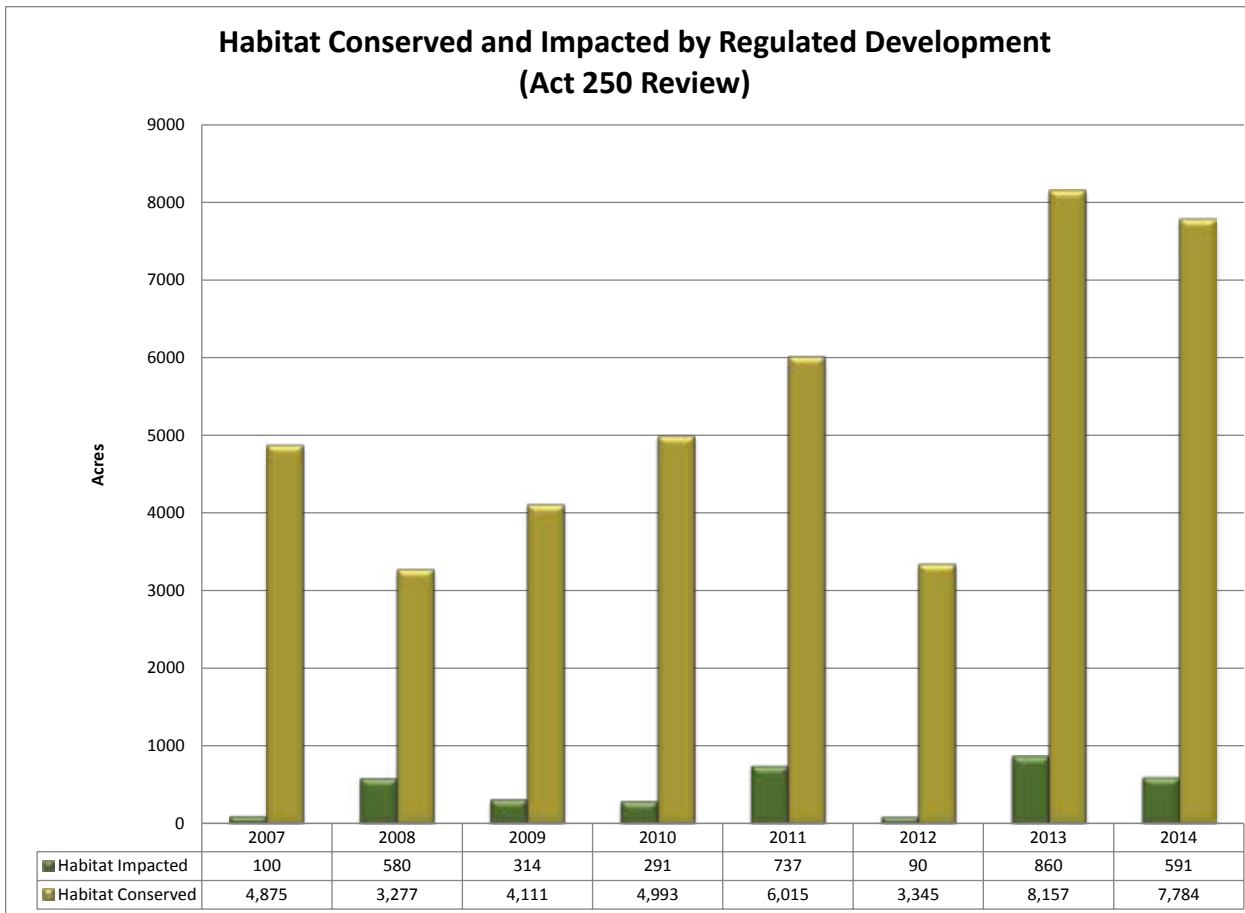
Performance Based Budgeting



RESOURCE CONSERVATION: NATURAL COMMUNITIES AND HABITATS PROGRAM

OUTCOME: Conserve, restore and enhance natural communities and habitats.

- **PERFORMANCE MEASURE:** Increase in the number of acres of habitat and shoreline protected through the regulatory process.

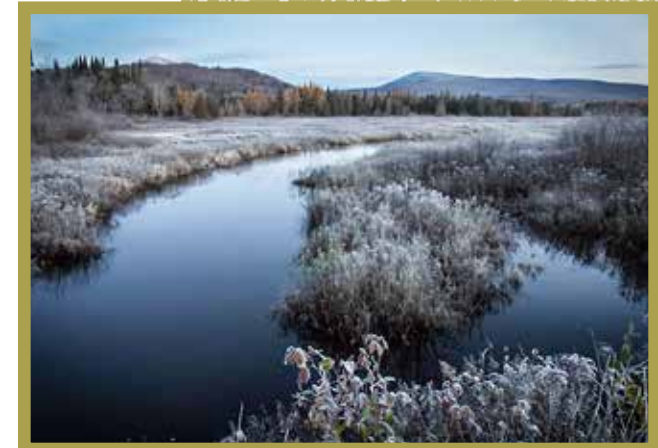


On average, more than 400 acres of habitat are lost annually to development projects that come under regulatory review. Although the review of such projects helps to protect critical habitat for wildlife, only an estimated one percent of the subdivisions in Vermont are regulated by Act 250. Many of the projects that do not require permits or regulatory review threaten Vermont's uplands, forest, streams and wetlands.

The department reviews development projects that require federal, state or local permits for potential impacts to fish, wildlife, plants and related habitats.

In 2014 these efforts included:

- 198 projects were reviewed.
- 7,784 acres of habitat were conserved or positively influenced.
- 591 acres of habitat were impacted by regulated development.



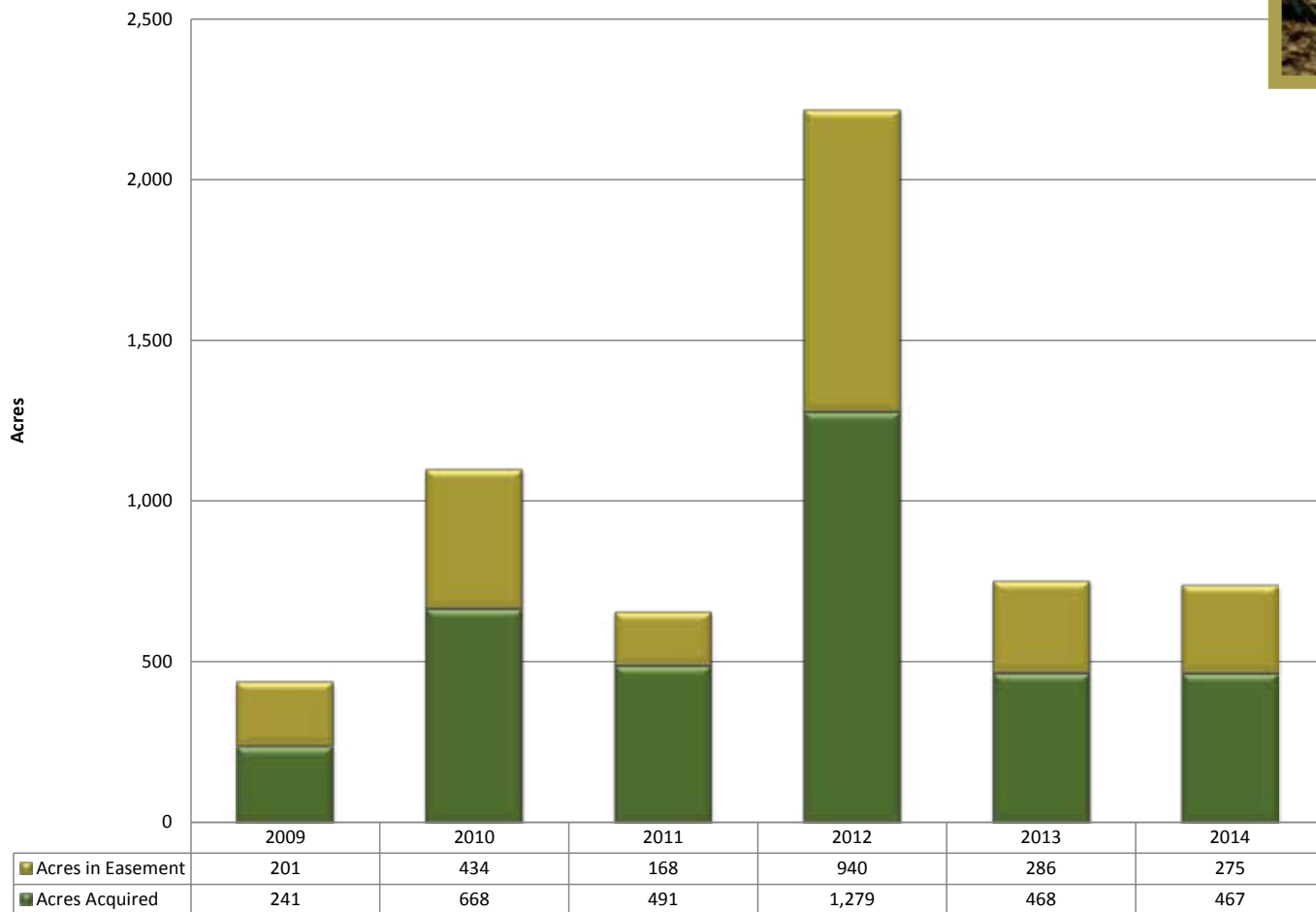
RESOURCE CONSERVATION: NATURAL COMMUNITIES AND HABITATS PROGRAM

OUTCOME: Conserve, restore and enhance natural communities and habitats.

- **PERFORMANCE MEASURE:** An increase in the cumulative number of acres of high-value habitats and natural communities conserved through acquisition or easements.



Land Acquisition and Conservation Easement Effort



Regulatory review is one tool to protect important habitat for fish and wildlife. The department also works with many partners to conserve important fish and wildlife habitat through acquisitions, easements and management agreements.

In 2014 the department conserved:

- 467 acres through acquisitions.
- 275 acres through easements.



RESOURCE CONSERVATION: NATURAL COMMUNITIES AND HABITATS PROGRAM

OUTCOME: Conserve, restore and enhance natural communities and habitats.

- **PERFORMANCE MEASURE:** Increase the number of culverts and dams that are passable to fish and other aquatic organisms and improve the communication between the Fish & Wildlife Department and road managers in addressing these issues.

Aquatic Organism Passage Project

The ability for fish and other organisms to move up and down streams to access a wide range of habitats is critical for their long-term survival. Vermont Fish & Wildlife staff have worked collaboratively with the Vermont Department of Environmental Conservation and VTrans to improve fish passage in Vermont. These efforts include:

- Developing and implementing technical design guidelines for road/stream crossings.
- Producing a laymen's guidebook, the Vermont Stream Crossing Handbook.
- Conducting an inventory of road/stream crossings in Vermont.
- Coordinating with private and governmental partner organizations to improve aquatic passage at dams and culverts.
- Follow-up evaluations of fish passage.
- Providing partial funding for aquatic organism passage projects.



Past construction practices for stream crossings has resulted in numerous barriers to aquatic movement throughout the state.



Fish & Wildlife works with engineers and road crews to create culverts that allow wildlife to freely pass upstream and downstream.

Recent Fish & Wildlife Department staff aquatic organism passage outreach efforts include:

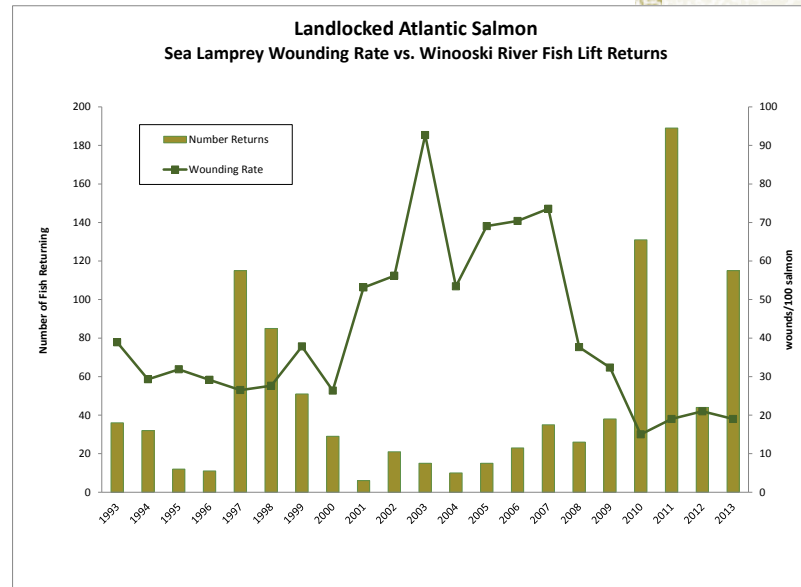
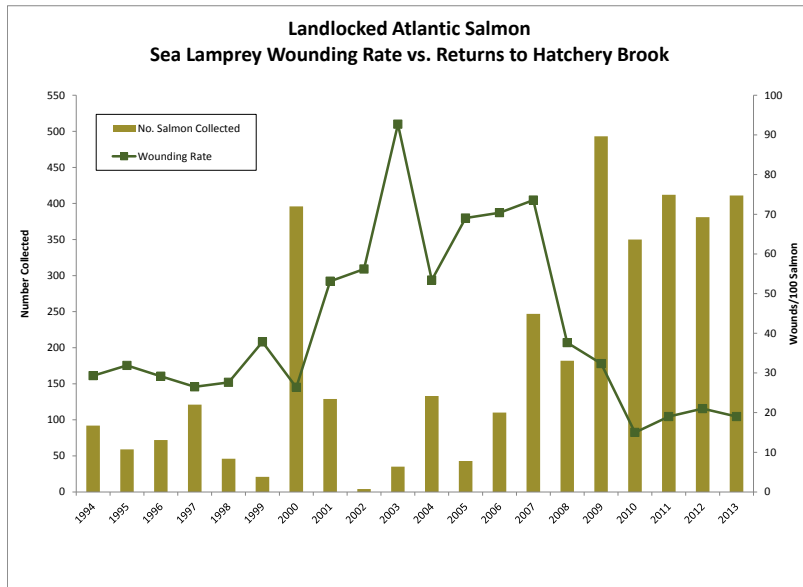
- ❑ Organizing an Aquatic Organism Passage summit.
- ❑ Participation in the Agency of Natural Resources municipal day.
- ❑ Attending the inaugural meeting of Watersheds United.
- ❑ Conducted a culvert workshop for Vermont road crews.
- ❑ Lectured at a civil engineering class at Norwich University.



RESOURCE CONSERVATION: FISH AND WILDLIFE SPECIES PROGRAM

OUTCOME: Conserve and restore fish, wildlife and plants species to maintain ecosystem integrity for the benefit of the public.

➤ **PERFORMANCE MEASURE:** Maintain or restore fish and wildlife populations at healthy and sustainable levels as defined in species management plans.



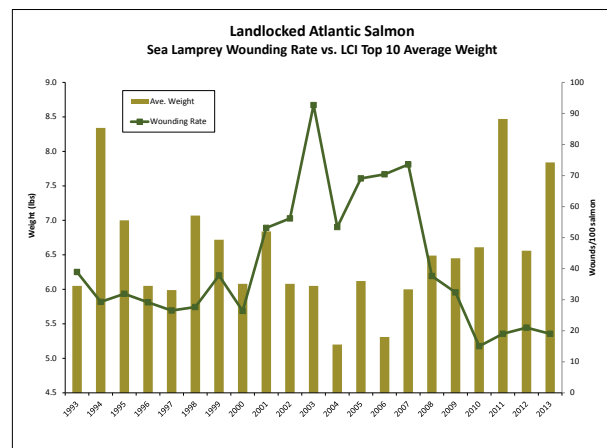
Sea lampreys are a parasitic fish and latch onto larger fish and suck nutrients from the host. Fish traps and annual chemical treatment in Lake Champlain tributaries have reduced sea lamprey populations.

The number of salmon returning to hatchery brook for spawning and caught in the fish trap at the Winooski One dam are indicators of the health of Lake Champlain's salmon population. As wounding rates have declined following reductions in sea lamprey populations, the number of

salmon have risen.

Similarly, the size of the lake trout and salmon entered in Lake Champlain International's annual fishing derby has also increased following reductions in sea lamprey numbers.

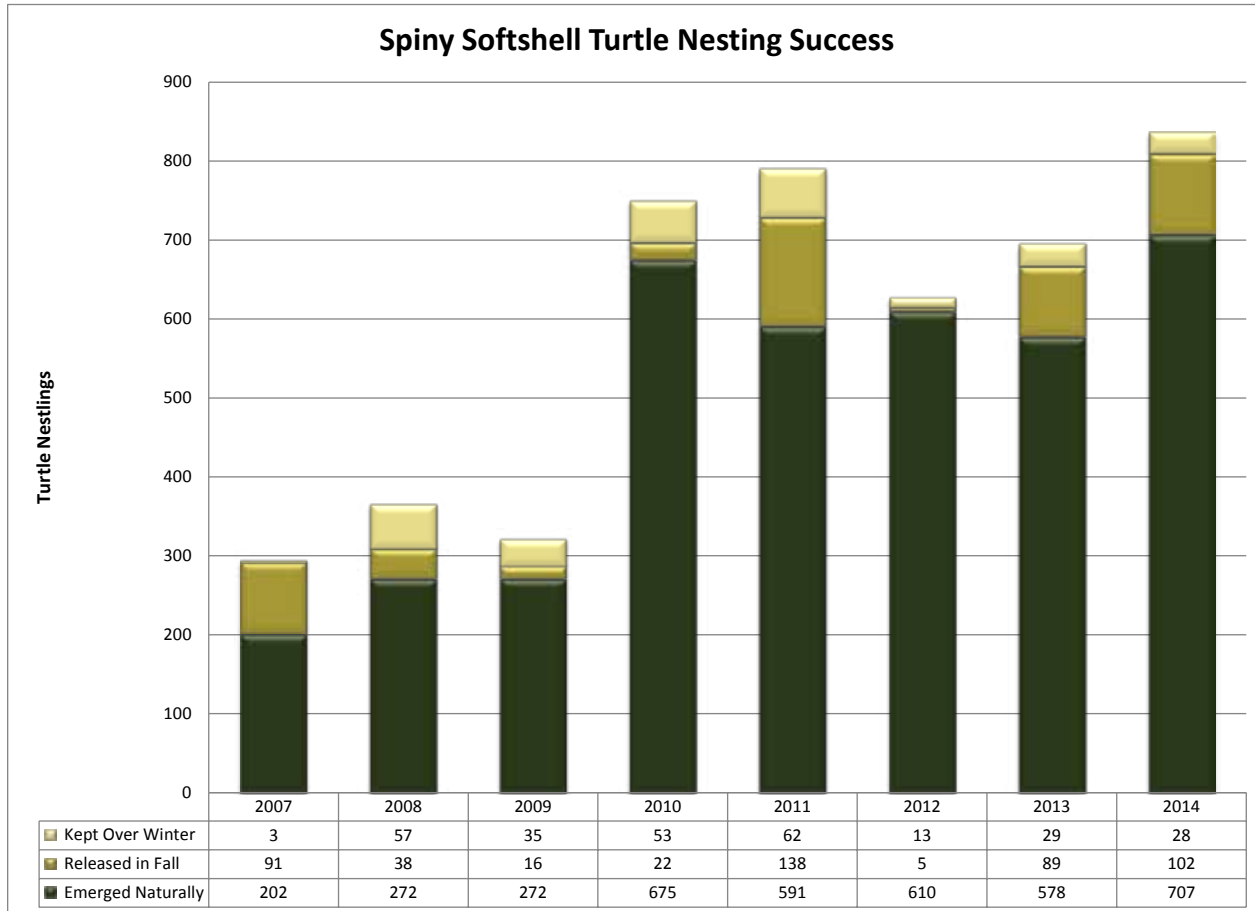
Controlling sea lamprey populations in Lake Champlain and its tributaries will help to improve survival of lake sturgeon, Atlantic salmon, lake trout, walleye and other native fish species. Lamprey wounding rates on lake trout and Atlantic salmon, as well as the number of fish returning to the lake's tributaries are performance measures the department uses to measure the success of the sea lamprey control program.



RESOURCE CONSERVATION: FISH AND WILDLIFE SPECIES PROGRAM

OUTCOME: Conserve and restore fish, wildlife and plants species to maintain ecosystem integrity for the benefit of the public.

➤ **PERFORMANCE MEASURE:** Maintain or restore fish and wildlife populations at healthy and sustainable levels as defined in species management plans.



Today, due to efforts to boost nesting success in the sand and shale pebble beaches of northern Lake Champlain, spiny softshelled turtles are beginning to recover. The number of live hatchlings has increased substantially in the past four years, but has still struggled due to flooding events in 2011 and 2013 and due to depredation.

Spiny softshell turtles are a state threatened species. The main threats to spiny softshell nests are loss of habitat from development or vegetative growth, depredation by raccoons, foxes, and skunks, and flooding of nesting sites.

The department is working to minimize these threats by:

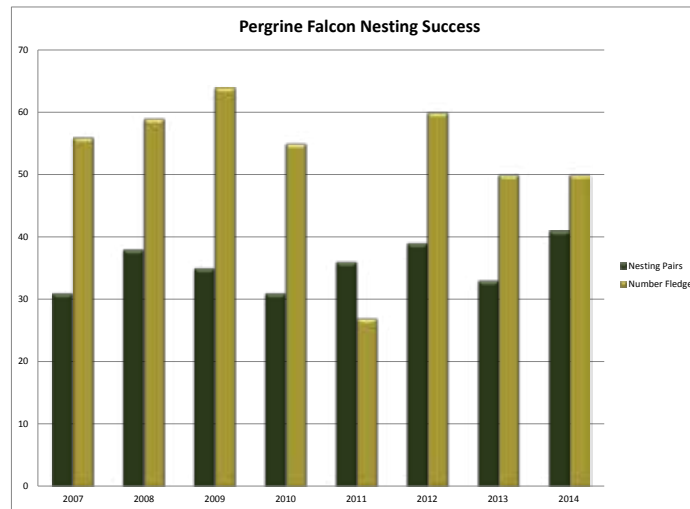
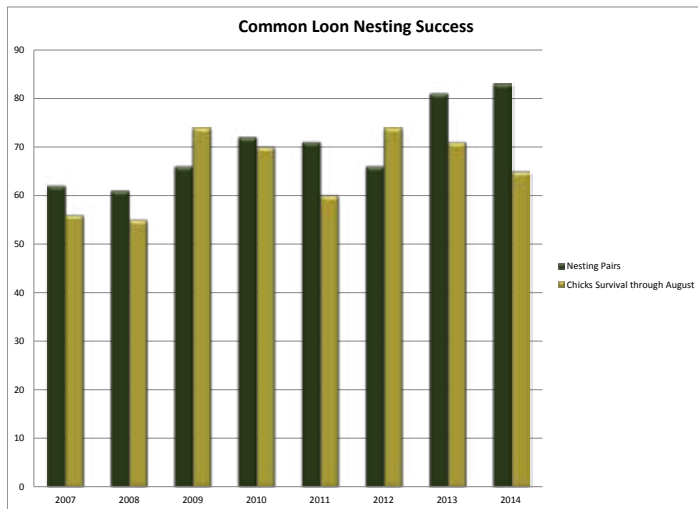
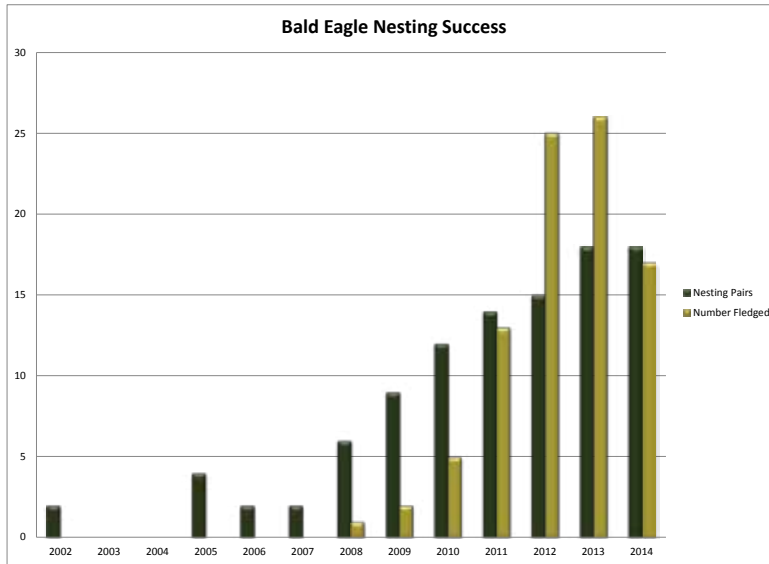
- ❑ Covering known nesting sites with wire mesh after females have laid their eggs to prevent animals from digging them up.
- ❑ Removing live eggs from any nests we find, incubating the eggs and raising hatchlings in captivity for release back into Lake Champlain in the spring.
- ❑ Partnering with the ECHO Lake Aquarium and Science Center to increase the number of turtles raised in captivity.
- ❑ Partnering with USDA Wildlife Services to trap depredating animals and assist with maintaining nesting site boundaries.
- ❑ Increasing public awareness and participation in wildlife conservation by conducting turtle beach cleanup day, where more than 100 people help prepare beaches for the spring nesting season.



RESOURCE CONSERVATION: FISH AND WILDLIFE SPECIES PROGRAM

OUTCOME: Conserve and restore fish, wildlife and plants species to maintain ecosystem integrity for the benefit of the public.

➤ **PERFORMANCE MEASURE:** Maintain or restore fish and wildlife populations at healthy and sustainable levels as defined in species management plans.



Bald eagles are on the state's threatened and endangered species list but Vermont's eagle population continues to increase.

- 17 eaglets were fledged from 18 nests in 2014.

The peregrine falcon and common loon were removed from the state's threatened and endangered species list in 2005. The department, with assistance from conservation partners and volunteers, continues to monitor these species to ensure the populations remain healthy.

- 37 peregrine falcon nests were monitored in 2014 with 41 producing a total of 50 fledglings.
- 83 common loon nesting attempts in 2014 resulted in 56 successful nests, producing 92 loon chicks with 65 surviving through August.

As recovered species continue to do well, the department will assess ways to keep effectively monitoring those species while looking to extend management activities to other species of greatest conservation need.



RESOURCE CONSERVATION: FISH AND WILDLIFE SPECIES PROGRAM

OUTCOME: Conserve and restore fish, wildlife and plants species to maintain ecosystem integrity for the benefit of the public.

➤ **PERFORMANCE MEASURE:** Prevent the introduction of any new invasive exotic species (including pathogens) and reduce, or at least contain, the geographic distribution of existing invasive exotics.

Spiny Water Flea

A new aquatic invasive species, the spiny water flea, was identified in Lake Champlain in the fall of 2014. This small crustacean is believed to have arrived in the lake via the canal connecting Lake Champlain with Lake George. Spiny water flea can disrupt the food web by preying on native zooplankton species, which are a food source for many small fish. The effects of the spiny water flea are expected to be modest in Lake Champlain, but the effects could be more dramatic if they are moved to smaller, inland lakes.



The spiny water flea represents the 50th aquatic nuisance species to arrive in Lake Champlain. Others include zebra mussels, alewives, Eurasian milfoil, and white perch.

In the absence of biological controls such as disease, predators, or competitors, these species can outcompete native fish and other species, depleting the lake's biodiversity.

The Agency of Natural Resources Invasive Species Workgroup's goal is to:

- Develop a shared definition of "invasive" and "nuisance" species.
- Define the nature and extent of the problem of invasive and nuisance species in Vermont in both aquatic and terrestrial ecosystems including ecological and economic risks.
- Evaluate public policy options for addressing this problem.
- Suggest a process for engaging the public and other policy-makers in a conversation about the options.

RESOURCE CONSERVATION: PUBLIC SUPPORT FOR LAND CONSERVATION PROGRAM

OUTCOME: Increase public support and understanding of land conservation issues, and promote and facilitate a land stewardship ethic in Vermont.

- **PERFORMANCE MEASURE:** Increase in the number of town plans that promote protection of local fish and wildlife resources, and the number of landowners receiving technical assistance for wildlife habitat on their land.

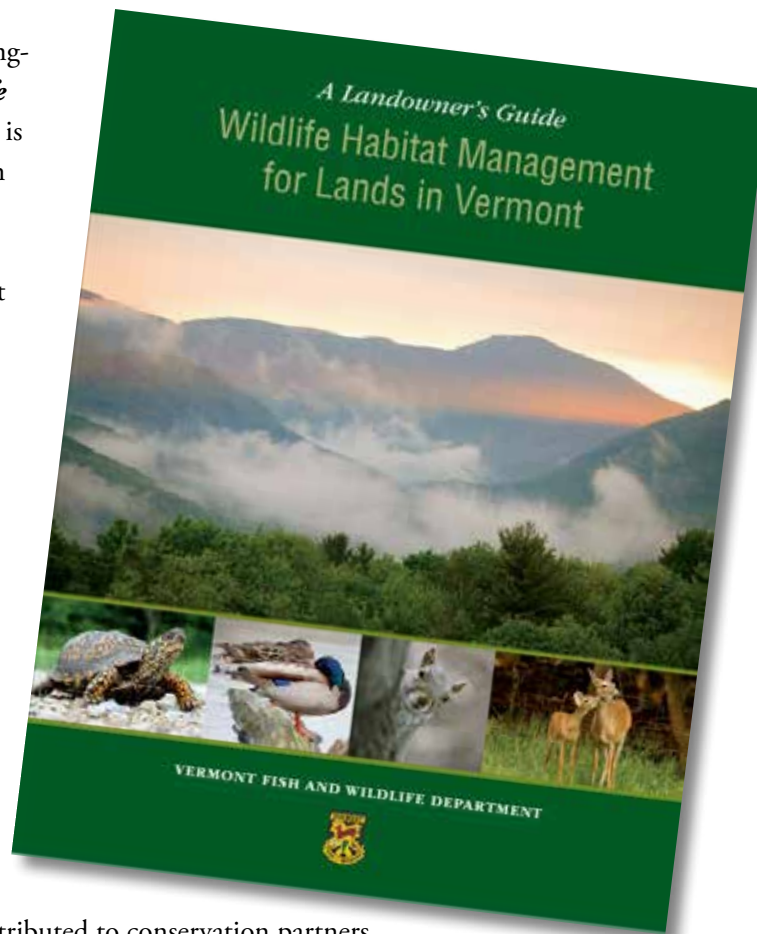
A Landowner's Guide – Wildlife Habitat Management for Lands in Vermont

In 2014 the department announced the release of the long-awaited book entitled *A Landowner's Guide – Wildlife Habitat Management for Lands in Vermont*. The book is a comprehensive guide to wildlife habitat management on private lands.

The Landowner's Guide was developed by the department in partnership with the Department of Forests, Parks and Recreation as well as the U.S.D.A.'s Natural Resource Conservation Service. Each chapter was authored by biologists and land managers with the Vermont Fish & Wildlife Department, with guidance and technical input from foresters and wildlife biologists with those other organizations.

The guide gives specific, easy-to-follow recommendations on methods for improving land for specific species and for fish and wildlife in general. It includes recommendations for managing for game species such as deer, turkeys, hare, ducks, and grouse, as well as nongame species from songbirds to amphibians.

One thousand copies have been published and will be distributed to conservation partners, foresters, biologists, and are available for sale on the department website for \$12.



Community Wildlife Program

The Community Wildlife Program (CWP) provides technical assistance to municipalities, regional planning commissions and NGOs on issues relating to conservation planning for fish and wildlife resources.

The department believes the increase in municipalities addressing fish and wildlife issues and resources through local plans and bylaws can be attributed to CWP. Some of the program's activities for 2014 include:

- Provide towns with technical assistance and the most up-to-date scientific information to towns and regional planning commissions.
- Worked with partners to enhance regional and collaborative partnerships for more effective conservation planning.
- Distribute copies of *Conserving Vermont's Natural Heritage*, an important conservation planning document.

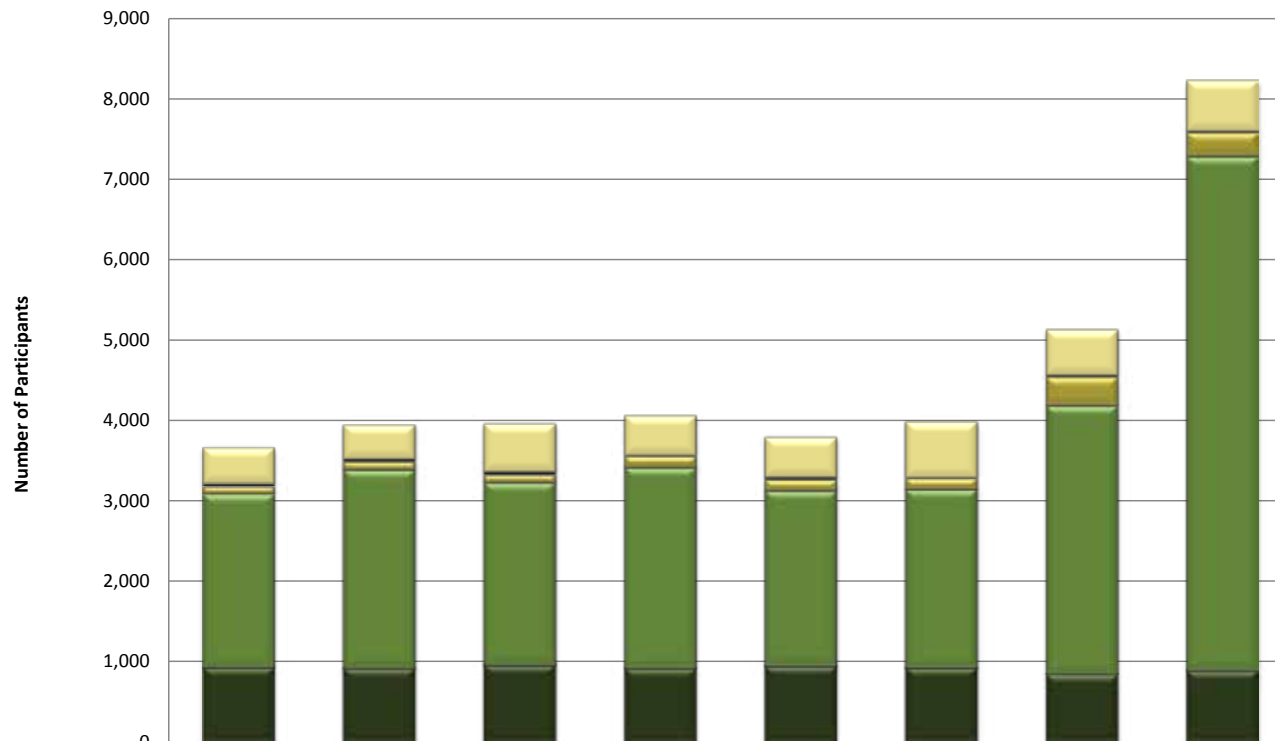


RESOURCE CONSERVATION: PUBLIC SUPPORT FOR LAND CONSERVATION PROGRAM

OUTCOME: Increase public support and understanding of land conservation issues, and promote and facilitate a land stewardship ethic in Vermont.

➤ **PERFORMANCE MEASURE:** Maintain or increase the public's support for and knowledge of fish and wildlife conservation and land stewardship.

Participation in Fish & Wildlife Education and Outreach Programs



■ Family Fishing Festival
 ■ Teacher's Course
 ■ Project WILD
 ■ Let's Go Fishing
 ■ Conservation Camps

The Vermont Fish & Wildlife Department provides several excellent educational opportunities for both children and teachers. Each program provides children and/or teachers with hands-on outdoor learning skills that connect them to Vermont's fish and wildlife. Below are the highlights for 2014:

- 895 youths attended Green Mountain Conservation Camp.
- 6,394 youths and adults participated in a Let's Go Fishing event.
- 637 youths and adults took part in our Family Fishing Festival.
- 299 participants attended a Project WILD program.
- 6 teachers attended Wildlife Management for Educators.

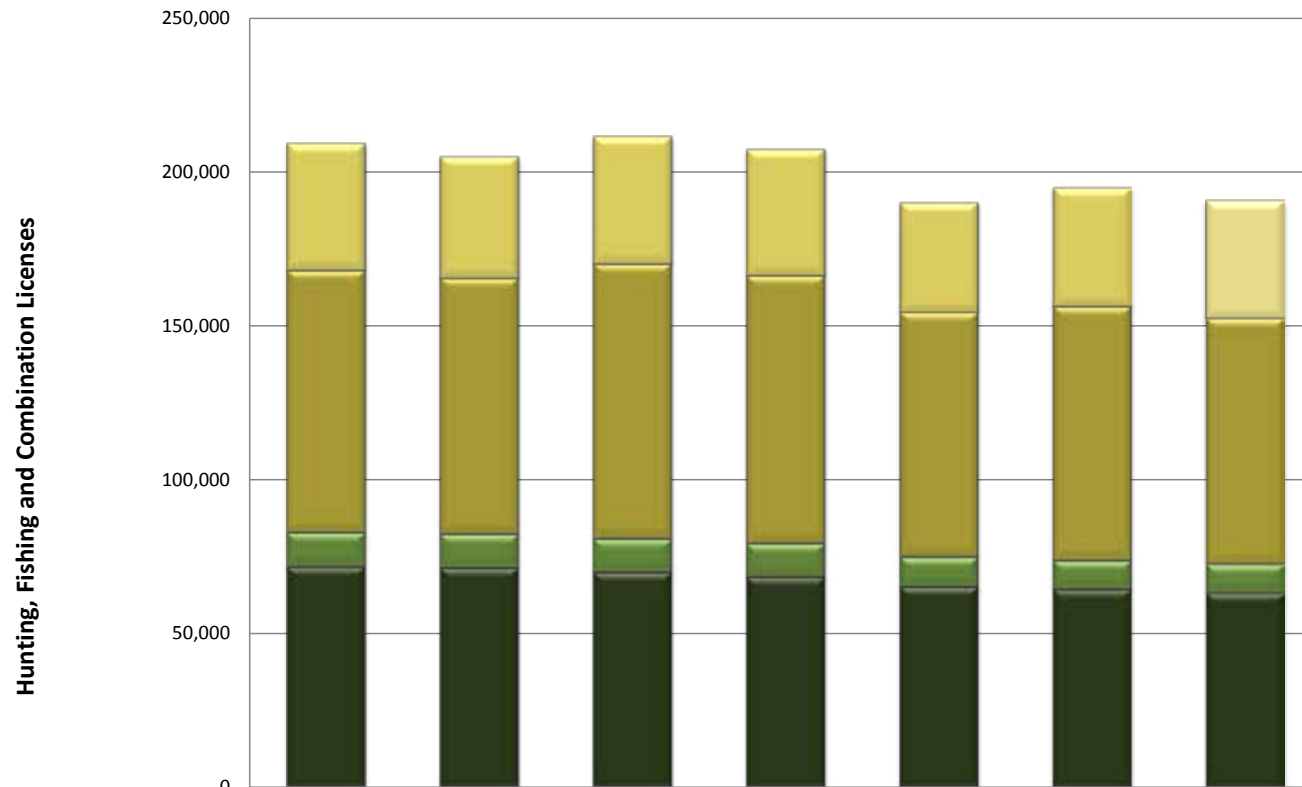


RECREATION: FISH AND WILDLIFE-BASED RECREATIONAL OPPORTUNITIES PROGRAM

OUTCOME: Provide hunting, fishing and trapping opportunities consistent with resource management goals and within ecological limits.

➤ **PERFORMANCE MEASURE:** Maintain the number of adults and youths participating in hunting, trapping and fishing in Vermont as measured by license sales.

Resident and Nonresident Hunting and Fishing Participation



	2007	2008	2009	2010	2011	2012	2013
Nonresident Fishing & Combo	41,346	39,513	41,400	40,932	35,786	38,586	38,204
Resident Fishing & Combo	85,166	83,126	89,287	86,959	79,356	82,519	79,814
Nonresident Hunting & Combo	11,151	11,070	10,881	10,880	9,742	9,428	9,411
Resident Hunting & Combo	71,938	71,525	70,165	68,723	65,477	64,589	63,427

Hunting, fishing, and trapping are rich traditions and an integral part of Vermont's culture and heritage. In 2013 hunting and fishing license sales declined slightly.

License sales for 2013 indicate:

- 118,081 licensed resident and nonresidents participated in angling opportunities.
- 73,706 licensed resident and nonresident hunters and trappers participated in regulated wildlife harvest opportunities.
- 2.1 percent decrease in participation in hunting, trapping and fishing in Vermont from 2012.

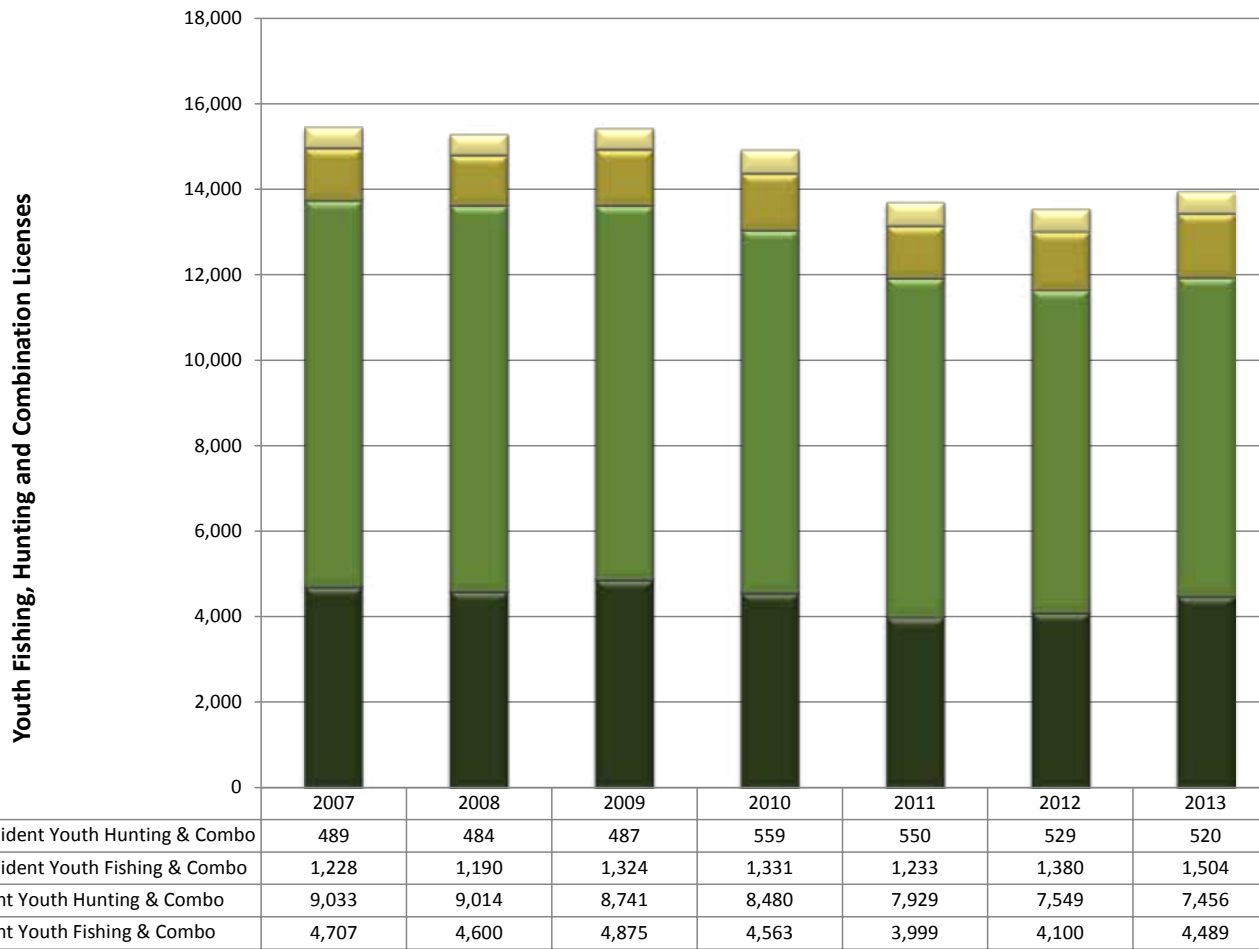


RECREATION: FISH AND WILDLIFE-BASED RECREATIONAL OPPORTUNITIES PROGRAM

OUTCOME: Provide hunting, fishing and trapping opportunities consistent with resource management goals and within ecological limits.

➤ **PERFORMANCE MEASURE:** Maintain the number of adults and youths participating in hunting, trapping and fishing in Vermont as measured by license sales.

Resident and Nonresident Hunting and Fishing Participation by Youths



Wildlife-based activities contribute to young Vermonters' understanding and appreciation of and commitment to the state's fish and wildlife species, their habitats and the environment. In 2013 youth participation in regulated hunting and fishing increased three percent from the previous year.

License sales for 2013 indicate:

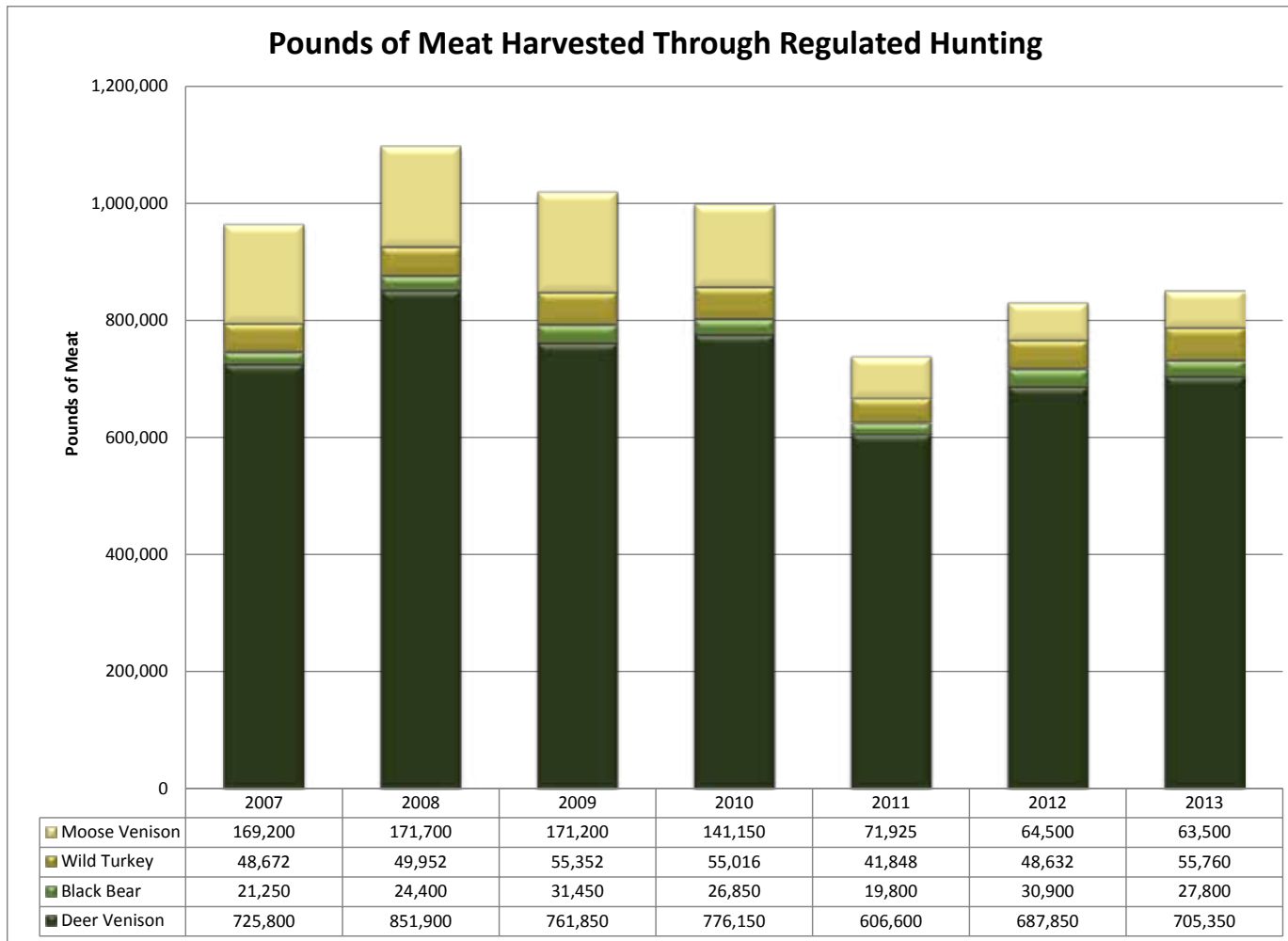
- 5,993 licensed resident and nonresident youths participated in angling opportunities.
- 7,981 licensed resident and nonresident youth hunters and trappers participated in regulated wildlife harvest opportunities.



RECREATION: FISH AND WILDLIFE-BASED RECREATIONAL OPPORTUNITIES PROGRAM

OUTCOME: Provide hunting, fishing and trapping opportunities consistent with resource management goals and within ecological limits.

➤ **PERFORMANCE MEASURE:** The amount of wild meat, fish and other provisions from wildlife resources annually harvested under regulated seasons shall be maintained at sustainable levels.



The regulated harvest of Vermont's big game species provides a way to maintain species population numbers within the limits of their habitat while allowing people to celebrate the state's rich hunting tradition and culture.

Hunters harvested more turkey and white-tailed deer in 2013 compared to 2012:

- 3 percent increase in white-tailed deer harvest.
- 15 percent increase in wild turkey harvest.
- Black bear harvest remains high.

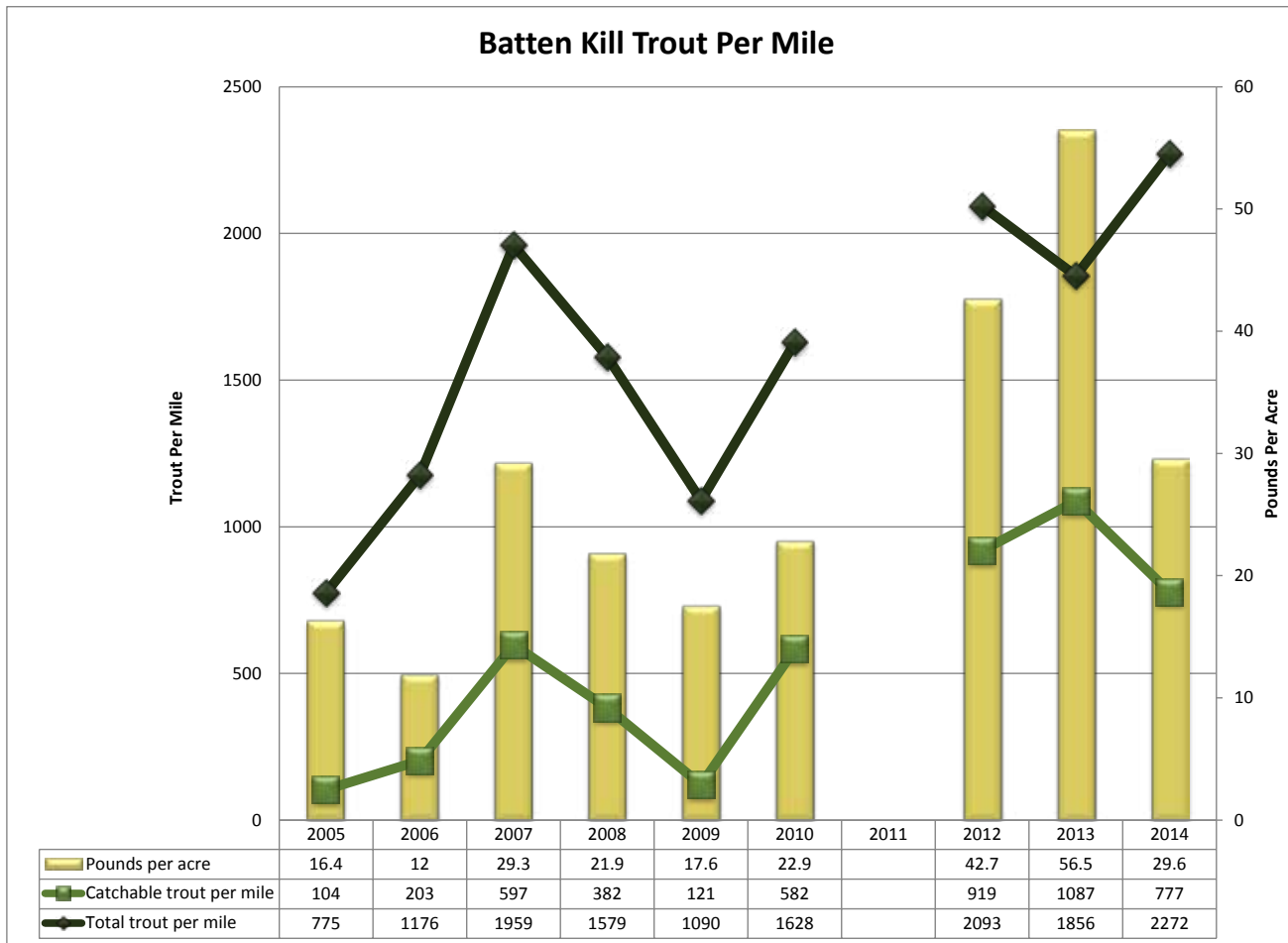
While moose permits have been reduced, the department increased muzzleloader season antlerless permits by 20 percent above 2012 levels in response to an estimated increase in deer population in 2013.



RECREATION: FISH AND WILDLIFE-BASED RECREATIONAL OPPORTUNITIES PROGRAM

OUTCOME: Provide hunting, fishing and trapping opportunities consistent with resource management goals and within ecological limits.

➤ **PERFORMANCE MEASURE:** The number of catchable fish per mile of the Batten Kill.



Habitat improvement is the key to enhancing the Batten Kill trout population. Fish & Wildlife staff have been working to provide additional cover in and along the Batten Kill to provide trout with a place to feed, hide and reproduce.

The department is working to provide world-class trout fishing opportunities on the renown Batten Kill by restoring and maintaining a self-sustaining wild trout fishery. Improving habitat and catch-and-release fishing regulations are strategies for increasing the number of catchable fish per mile.

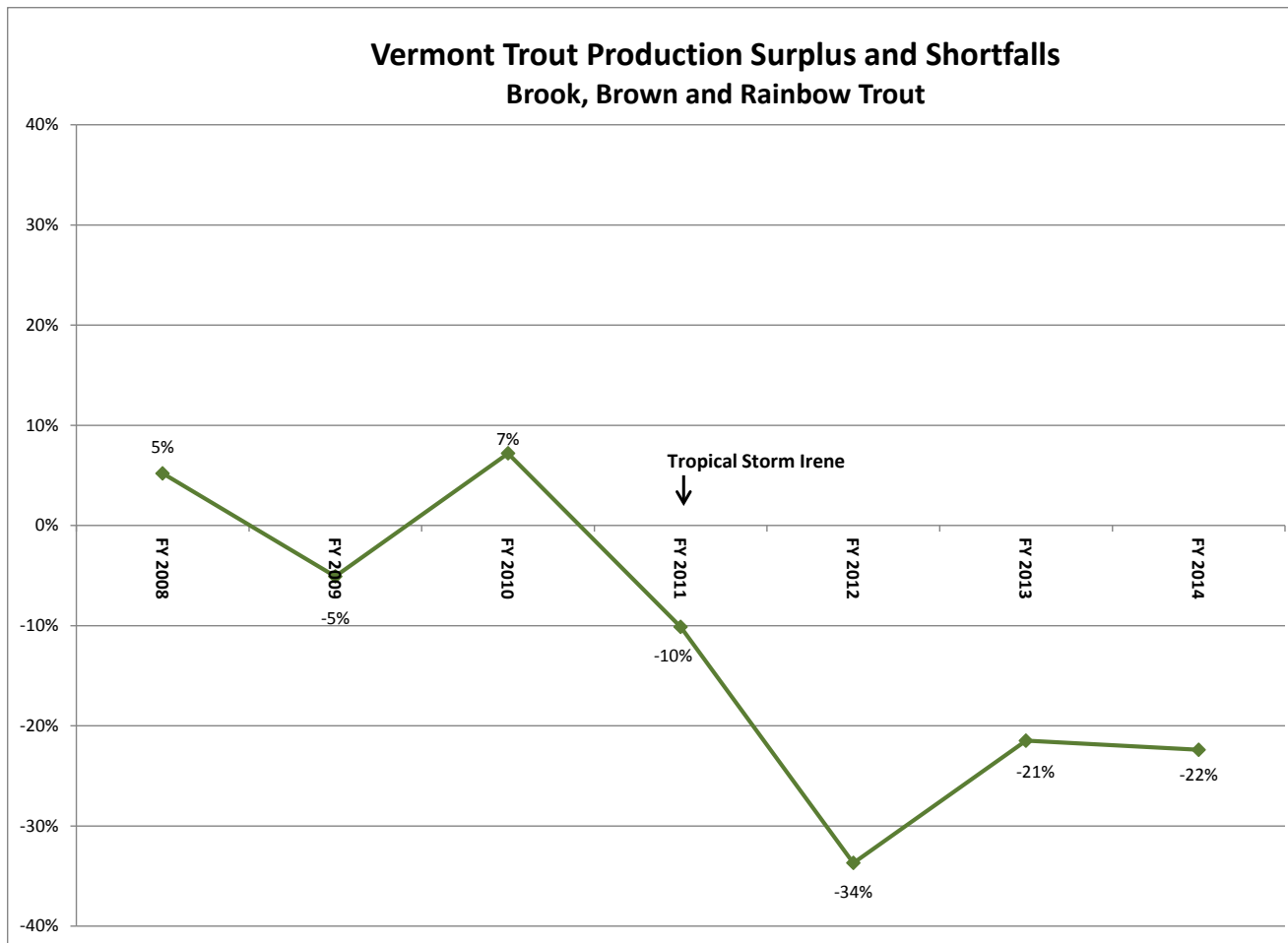
Undisturbed, naturally vegetated riparian buffers are extremely important in maintaining cool water temperatures and stable streambanks, filtering pollutants and providing food and shelter for fish and other aquatic organisms. As trees mature and fall into the river they also provide important instream habitat and cover for fish. These benefits are realized not only within the protected stream reach, but also in its downstream receiving waters.



RECREATION: FISH AND WILDLIFE-BASED RECREATIONAL OPPORTUNITIES PROGRAM

OUTCOME: Provide hunting, fishing and trapping opportunities consistent with resource management goals and within ecological limits.

➤ **PERFORMANCE MEASURE:** Maintain or restore fish populations at healthy and sustainable levels as defined in species management plans.



Since Tropical Storm Irene, the department has experienced a 20 to 30 percent shortage of adult hatchery-reared trout needed for stocking into state waters due to the loss of the Roxbury Fish Hatchery.

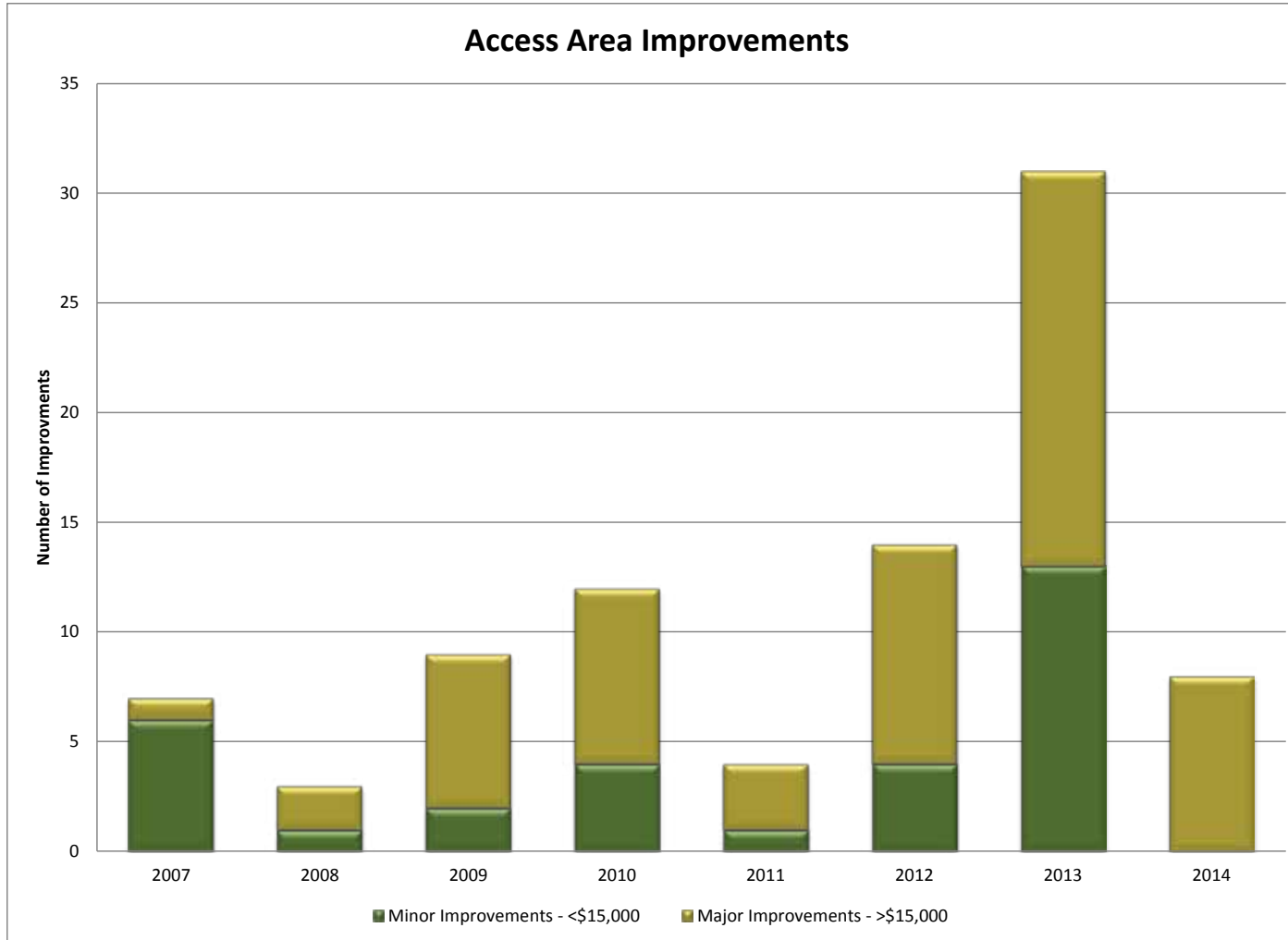
The department implements management actions to keep fish populations healthy, balanced, and productive and to improve and enhance aquatic communities and fishing in Vermont. Fishing regulations, fish stocking, nuisance species control and habitat improvements are examples of management actions.



RECREATION: FISH AND WILDLIFE-BASED RECREATIONAL OPPORTUNITIES PROGRAM

OUTCOME: Provide hunting, fishing and trapping opportunities consistent with resource management goals and within ecological limits.

➤ **PERFORMANCE MEASURE:** Provide public access to Vermont waters.



The department's fishing access areas provide public access to waters in Vermont for a growing number of shore anglers, and boaters launching watercraft and fishing. The access area program is funded by motorboat registration fees, capital funding and matching federal funds.

Through the department's access area program the following was accomplished:

- ❑ 183 developed fishing access areas were maintained—an increase of five sites from 2011.
- ❑ \$908,821 was spent on basic maintenance, capital improvement projects, new carry-on sites, and major infrastructure improvements.
- ❑ Expenditures ranged from \$440 for leasing land for access to Lewis Creek to more than \$461,000 for designing, permitting and constructing the John Guilmette Access Area on Lake Champlain

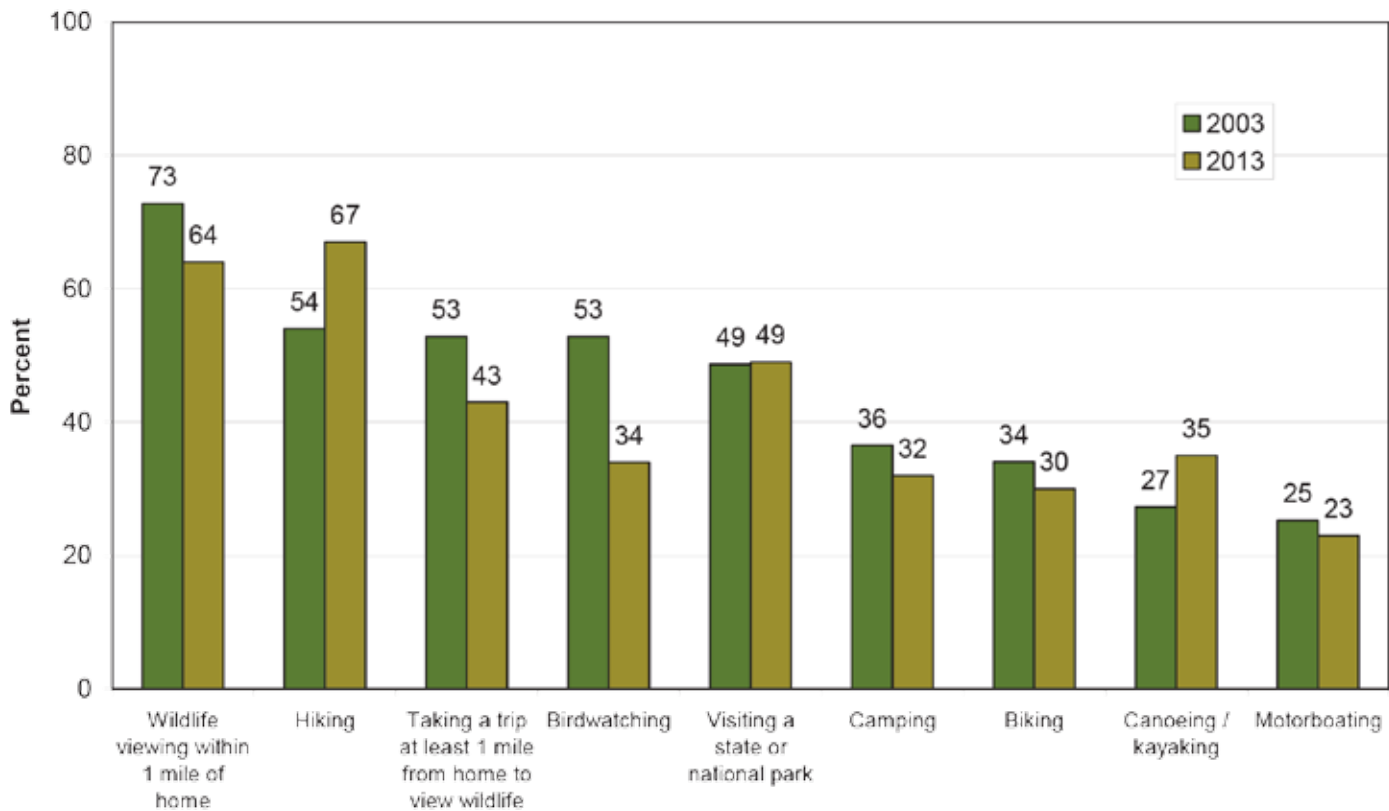


RECREATION: FISH AND WILDLIFE-BASED RECREATIONAL OPPORTUNITIES PROGRAM

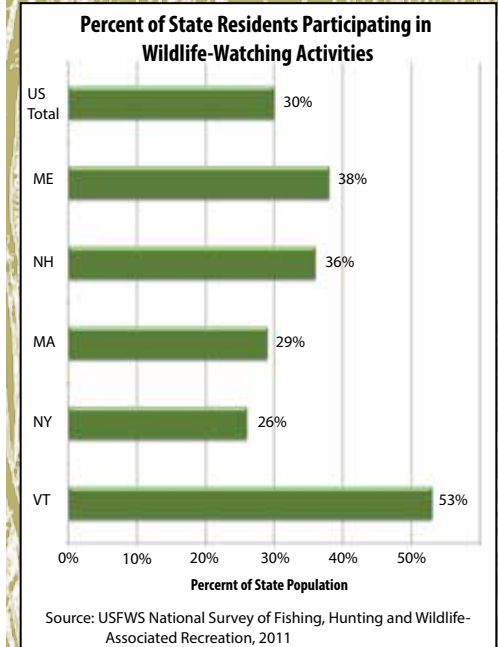
OUTCOME: Provide viewing and photography opportunities of fish and wildlife consistent with resource management goals while ensuring the protection of the observed species.

➤ **PERFORMANCE MEASURE:** The number of adults participating in wildlife-watching activities in Vermont.

Vermont Residents Participation in Outdoor Activities



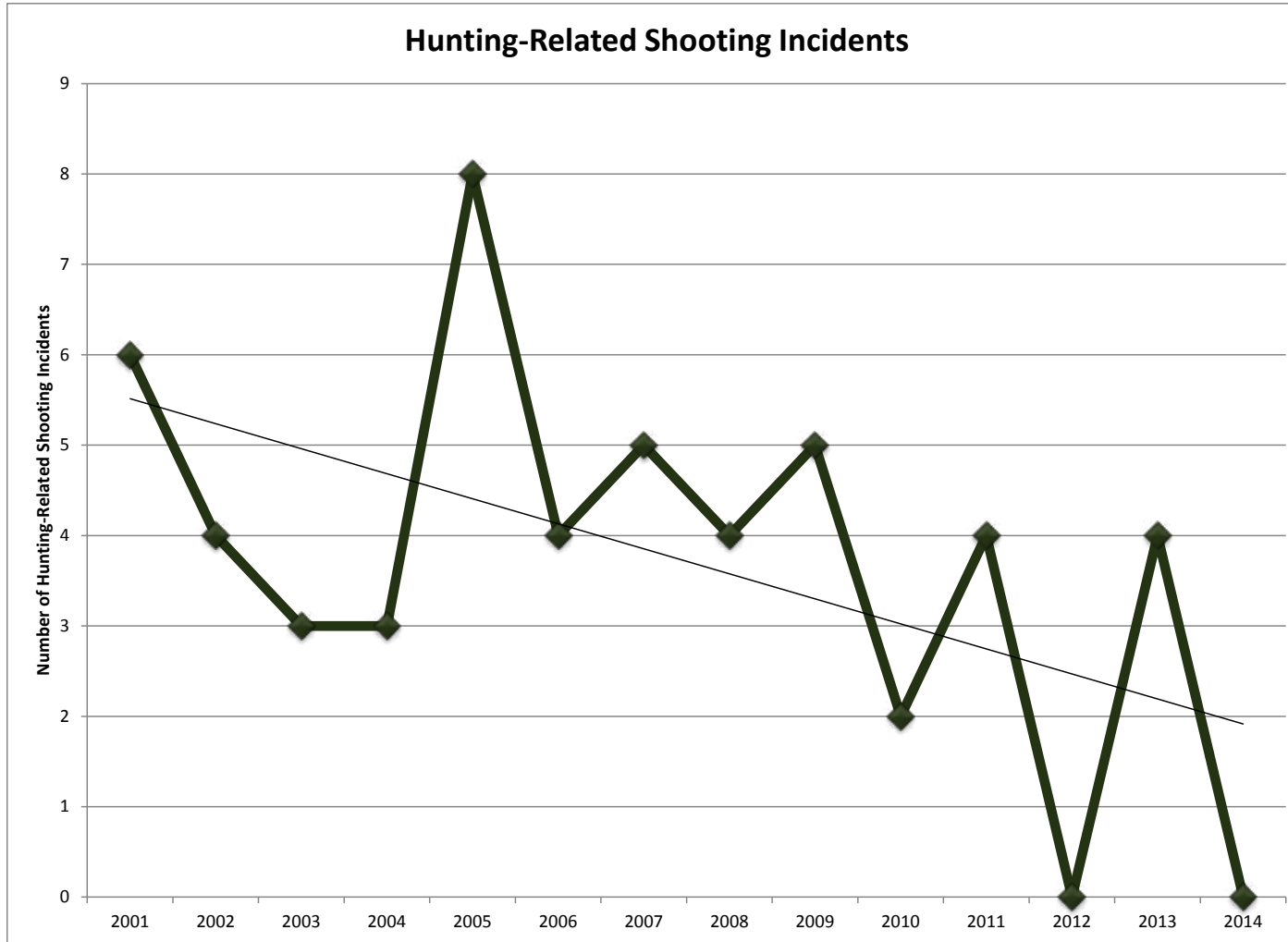
Vermont residents continue to be enthusiastic wildlife watchers but they are also becoming more avid hikers, state park visitors, and canoe/kayakers. A survey of outdoor participation among Vermont residents was conducted in 2003 and again in 2013. Wildlife watching has dropped from 73 to 64 percent, but still ranks as the second-highest outdoor activity from the previous decade. Additionally, Vermont remains highest in the nation in percentage of residents who watch wildlife.



SAFETY: HUMAN SAFETY WITH WILDLIFE PROGRAM

OUTCOME: Limit the number of human conflicts, injuries and fatalities that result from encounters with wildlife or participation in fish and wildlife recreational activities.

➤ **PERFORMANCE MEASURE:** The number of hunting-related incidents.



The 2014 hunting season completed without a single hunting-related shooting incident, continuing the downward trend for hunting-related accidents. Since 2001, the average incident rate is less than four injuries per year.

Hunter Education efforts in 2014 include:

- 3,056 students certified in hunter education.
- 1,290 students certified in bow hunter education.
- 281 students certified in trapper education.
- 177 courses taught.
- 293 hunter education instructors.

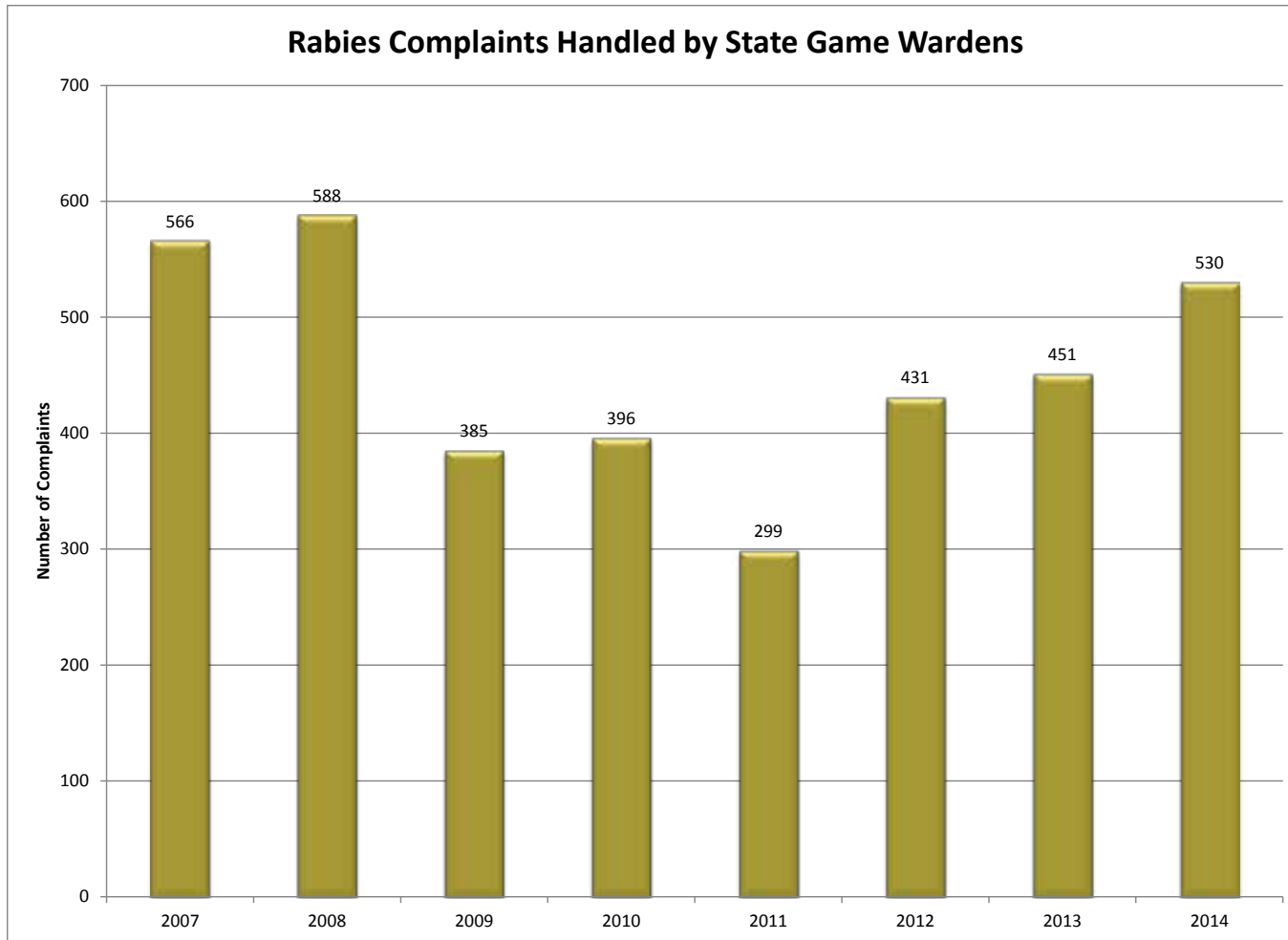
Increased adoption of hunter orange, mandatory bow hunter education, and an increasing percentage of well-trained firearms hunters should continue to keep the number of hunting accidents low.



SAFETY: HUMAN SAFETY WITH WILDLIFE PROGRAM

OUTCOME: Limit the number of human conflicts, injuries and fatalities that result from encounters with wildlife or participation in fish and wildlife recreational activities.

➤ **PERFORMANCE MEASURE:** The number of human exposures to transmittable diseases from fish and wildlife species.



Vermont Fish & Wildlife staff play a critical role in the success of the Vermont rabies management program.

In 2014 the activities included:

- ☐ 530 responses by a game warden to help resolve a rabies-related problem.
- ☐ Informing the public about the rabies threat by responding to questions.
- ☐ Providing information during hunter/trapper education classes or furbearer presentations.
- ☐ Collecting and submitting suspected rabid animals for testing to the Vermont Department of Health.

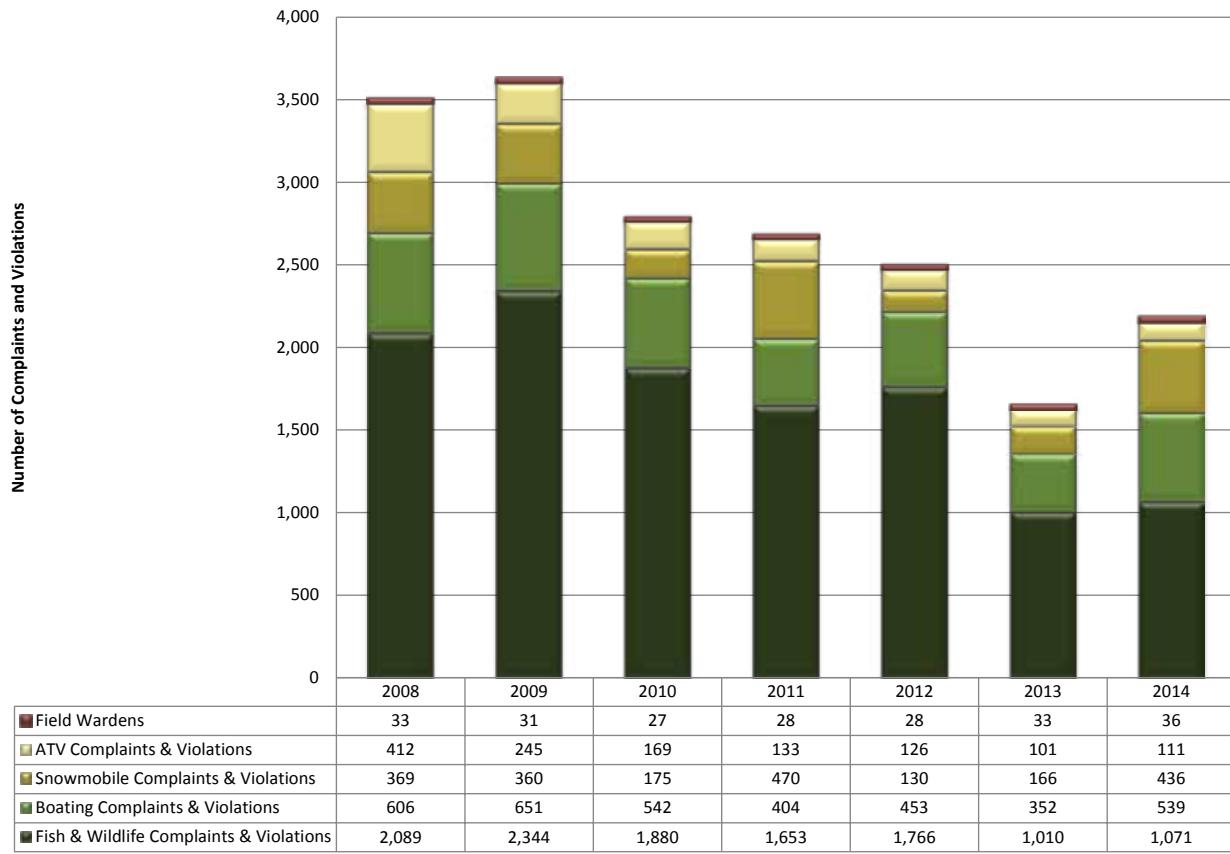


SAFETY: HUMAN SAFETY WITH WILDLIFE PROGRAM

OUTCOME: Limit the number of human conflicts, injuries and fatalities that result from encounters with wildlife or participation in fish and wildlife recreational activities.

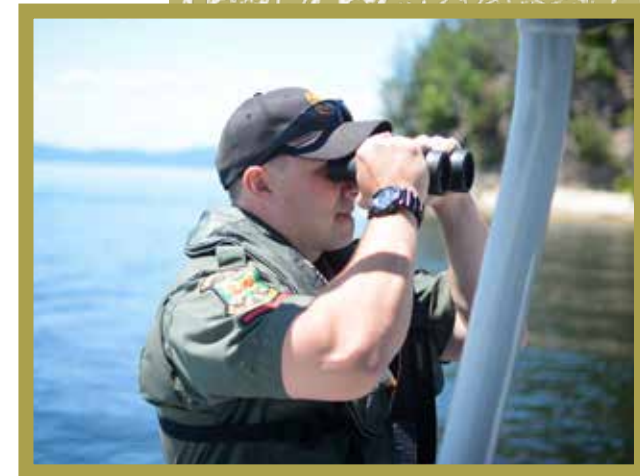
➤ **PERFORMANCE MEASURE:** The number of responses to assist in emergency situations and violations of other regulations and statutes per year.

Complaints and Violations Detected by Game Wardens Based on Type



The Fish & Wildlife Law Enforcement Division has many responsibilities that are incidental to their core fish and wildlife duties including:

- ☐ Helping to protect human health and ensure safety by responding to emergencies and search and rescue operations.
- ☐ Enforcing laws pertaining to ATVs, snowmobiling and boating.
- ☐ Assisting in limiting habitat destruction and pollution by investigating and reporting on such occurrences.



The Fish & Wildlife Law Enforcement Division has seen a large amount of turnover due to retirements, adding 12 new wardens in the past two years and a new head of law enforcement in 2014, Col. Jason Batchelder. The number of citations has temporarily declined as new wardens spend time in training and veteran wardens spend additional hours training them.

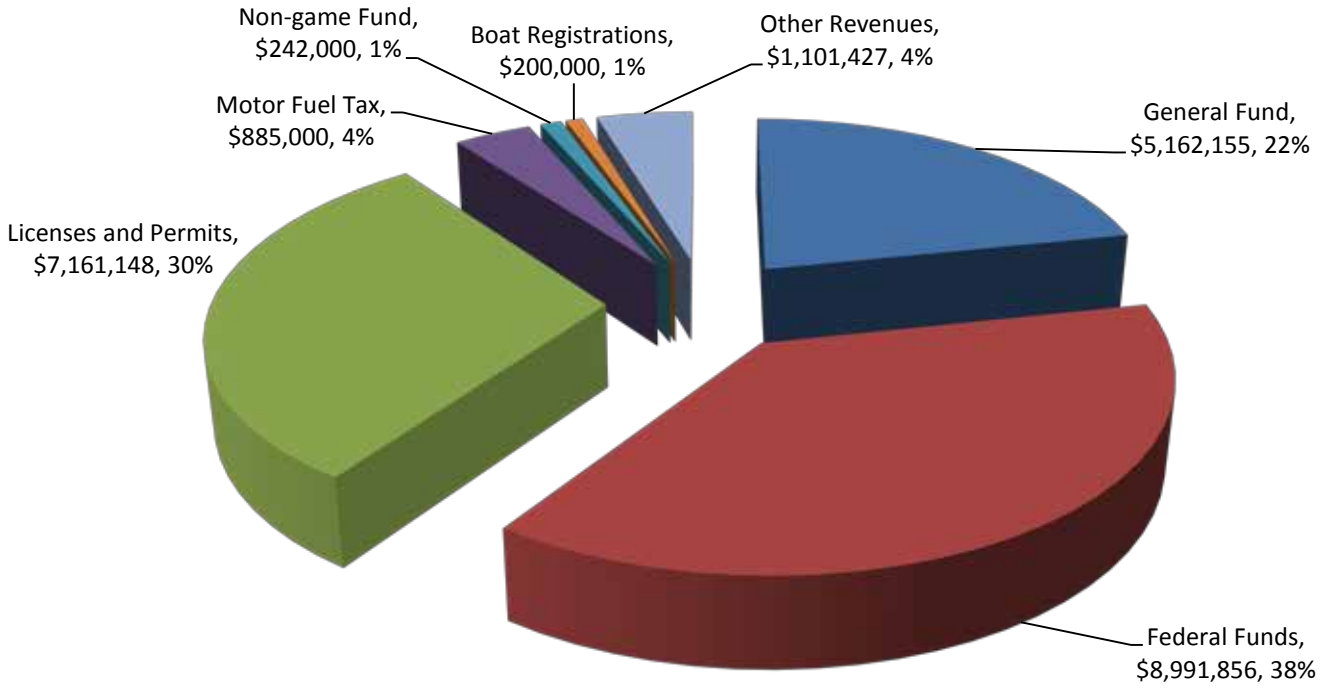


Revenues and Expenditures

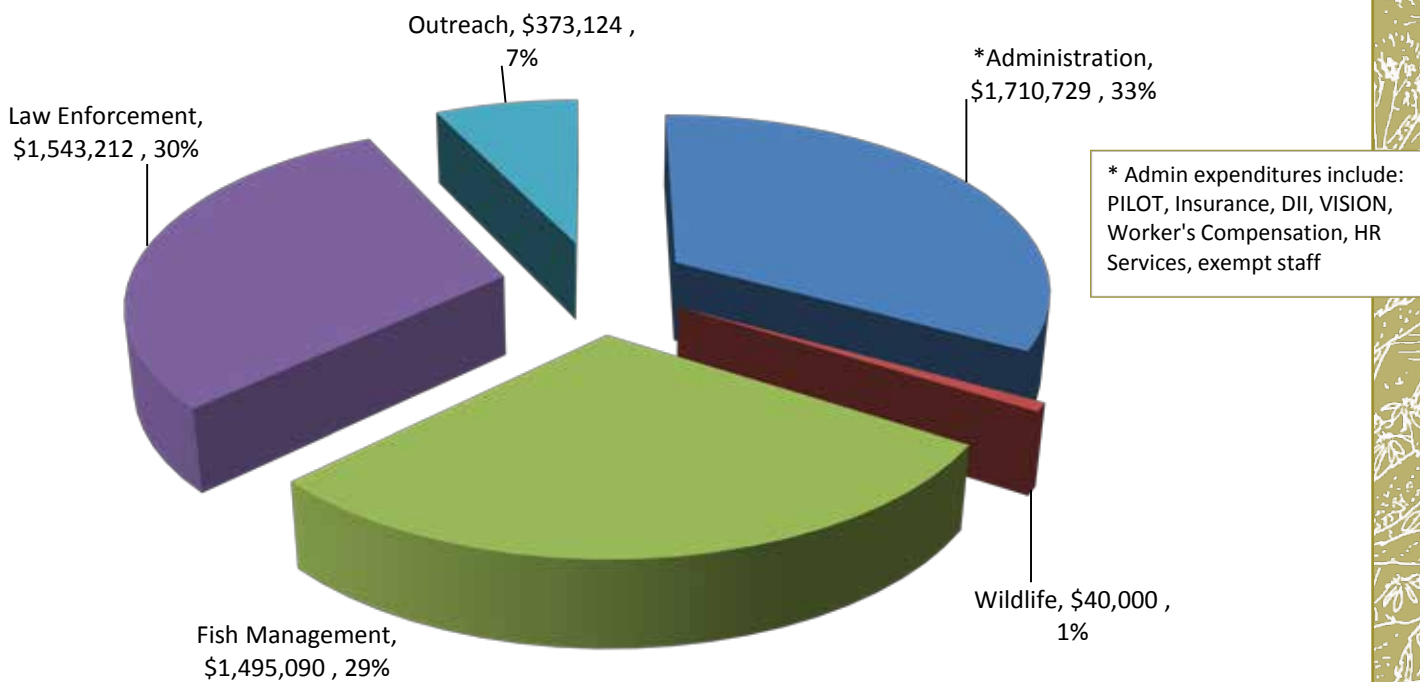


Fish & Wildlife Department FY 16 Revenues and Expenditures

FY16 Estimated Revenues

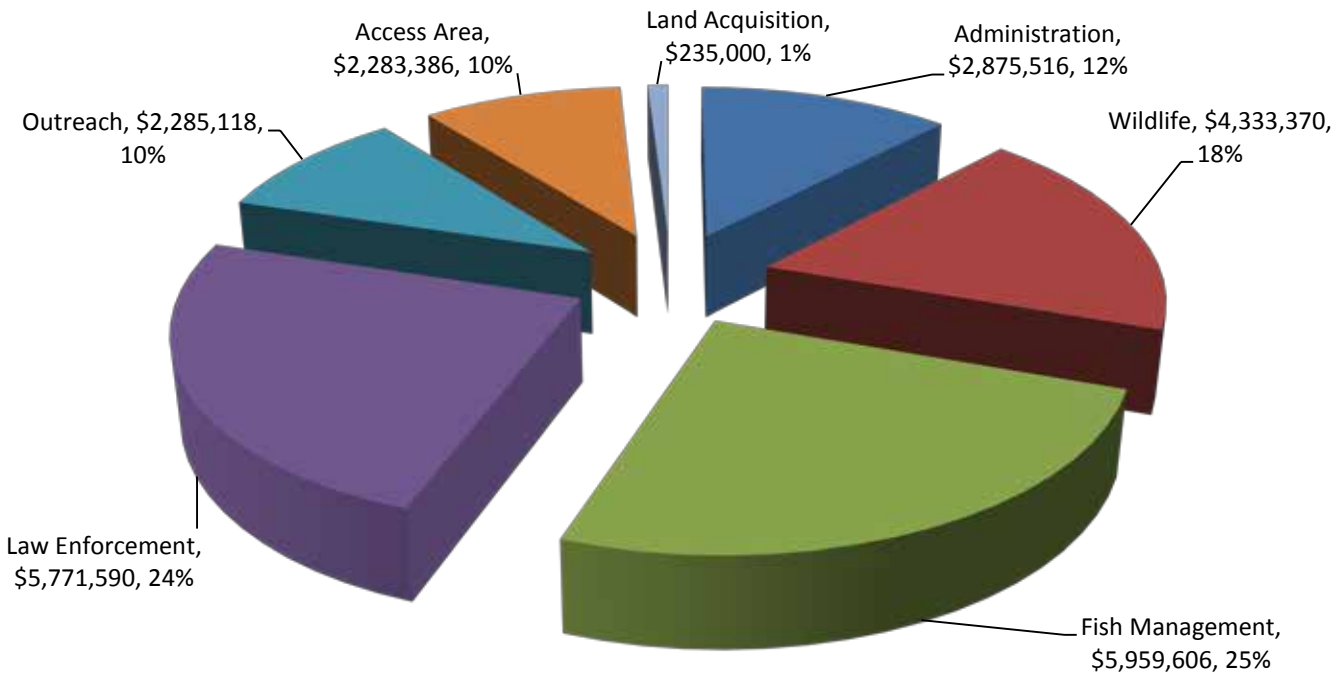


FY16 Proposed Use of General Funds by Division



Fish & Wildlife Department FY 16 Revenues and Expenditures

FY16 Proposed Expenditures by Program



Public Benefits



Activities Affecting All Vermonters Through Broad Land Conservation and Technical Assistance Activities

FISHERIES DIVISION

Act 250 and other permit review (including some hydro review)

Aquatic nuisance species management

Aquatic habitat protection and restoration

Public outreach and education about fish and other aquatic issues

Fish health testing and disease diagnostics for all state fish culture stations as well as Vermont's private and commercial aquaculture operations to ensure clean, healthy fish are being transferred into Vermont's waterbodies

Access Areas – provide safe and convenient public access to public waters

Importation Permits and Breeder Licenses – ensures no unwanted species are introduced into Vermont waters and approves suitable private aquaculture facilities to maintain healthy, non-invasive waters in Vermont

Scientific Collection Permits – enables scientific data to be taken to assess water quality, population sizes, biological indices of Vermont waters

Natural Fish Health Survey – analyzes the health of natural fish populations in Vermont to maintain clean healthy Vermont waters

Watershed Grants program – provides grants to towns, nonprofit organization and community groups to fund localized efforts to protect water resources

Fisheries Total \$791,160



WILDLIFE DIVISION

Wildlife Habitat Land Acquisition: In 2014, the Department completed 7 state land acquisitions totaling 467 acres of additions to existing WMAs. In addition, the Department completed 1 conservation easement project totaling 275 acres.

Technical Assistance to State Forests & Parks lands: conducted ecological inventories, assessments and assisted with development of management plans and management activities on 100,000 acres of state forests and state parks that benefit wildlife and habitat.

Technical Assistance to Towns/ land use planning: In 2014 the Department worked with 164 towns and all Regional Planning Commissions in Vermont on conservation planning initiatives.

Technical Assistance: In 2014 to more than 223 Private Landowners (NRCS-WHIP, habitat info., beaver issues) influencing approximately 87,500 acres of wildlife habitat.

Land Use Permits (250, 248, wind projects, habitat mapping): The Department reviews an average of 100 to 500 permits each year to address impacts to important wildlife habitat. In 2014, the Department reviewed 953 permit applications for issues and impacts associated with significant fish and wildlife habitat.

Management/planning of 135,000 acres of F&W land for all to enjoy (habitat, infrastructure)

Technical assistance to public on human/wildlife conflicts including:

- Black bear conflicts at birdfeeders, damage to agriculture, campgrounds, and garbage
- Beaver conflicts with landowners/towns. Technical assistance and the installation of beaver baffles to control water levels
- Bats in houses for citizens needing assistance for removing bats or safely excluding the animals from homes. Includes training for Vermont wildlife control agents.
- Advice on snakes inside and near home, including removal of state listed snakes at or near homes of concerned residents

Conservation of uncommon, rare, threatened or endangered species: Protect turtle nests, monitor bats and WNS, rare reptiles, birds, mussels, plants, etc.

Climate change planning through 10 year update to the Wildlife Action Plan (WAP): Work with many partners to define strategies for the conservation of Species of Greatest Conservation Need (SGCN).

Natural community inventories across the state: Identify significant natural communities and rare species on cooperating landowners' properties and provide management recommendations; these inventories also help set statewide conservation priorities. Ongoing oak-pine forest project.

Review of private lands enrolled in Use Value Appraisal for significant natural communities, rare species, vernal pools, and wildlife habitat (part of Interagency TA).

Landowner Incentive Program inventory and conservation of rare plants on private lands: The Department completed the LIP program in 2014. As a result, the Department now holds 9 LIP easements on 2095 acres of private land for the conservation of rare species and unique habitats and natural communities.

Provide technical assistance on critical wildlife habitat, rare species, and significant natural communities to towns, government agencies, and private citizens

Mapping critical wildlife, rare species, and natural community for planning and conservation

Invasive Species: Work with partners to provide workshops and identification and management information to land managers and owners. Early detection and response to Japanese knotweed invasions following Irene.



Lead statewide planning efforts that influence town-level land and water conservation planning (e.g. Habitat Block project and Natural Resources Mapping Project): Continuing to work with individual towns and groups of towns on various town planning initiatives that address fish, wildlife and natural resources conservation. Have developed a consistent set of natural resource maps for all towns in Vermont using information from the recently completed BioFinder GIS mapping project, habitat block project, and ANR natural resources atlas. Working with the staying connected initiative that includes New York, Vermont, New Hampshire, and Maine to better understand and conserve important wildlife habitat corridors within the larger northern forest region. Working closely with VTRANS to plan and implement transportation infrastructure projects to better address fish and wildlife movement and related public safety.

Outreach at Dead Creek WMA (20,000 visitors annually) and many speaking/television engagements

Wildlife Total \$2,175,568

LAW ENFORCEMENT DIVISION

Recreational enforcement (boating, snowmobile, and ATV enforcement activities)

Search and rescue operations

State emergency response operations/training (i.e., Radiological, etc.)

Rabid animal responses – This is a public safety not F&W issue although we are best equipped to handle it

Assisting other law enforcement agencies (backing them up – handling violations encountered beyond F&W law enforcement, etc.)

Staff time for providing trainers at the Police Academy (to include time spent as the training assistants at the basic Police Academy class, K-9 instructors, etc.)

Dispatch and maintenance of mountain top repeaters

Animal damage intervention and removal of big game animals from road sides

Law Enforcement Total \$273,521

EDUCATION

Green Mountain Conservation Camps (1000 campers/year)

Education Total \$446,640

GRAND TOTAL \$3,686,889



Fish & Wildlife Accomplishments



Highlights of Fish & Wildlife Department Accomplishments

As per Strategic Plan Goals and Outcomes - 2014

DEPARTMENT MISSION: The conservation of fish, wildlife, plants and the habitats they depend on for future generations of Vermonters.

GOAL A: Conserve, enhance, and restore the ecological integrity of Vermont's natural communities and habitats and the ecological processes that sustain them.

PROGRAM: Conservation of Natural Communities and Habitats

OUTCOME I: Conserve, restore, and enhance natural communities and habitats that have high wildlife and ecological value in Vermont, and preserve ecosystem integrity.

COMPLETED:

- ☑ **West Mountain/Kingdom Heritage 10-year plan completed. Worked with partners to complete the 10-year amendment for lands purchased in 1998, perhaps the most ambitious conservation project in state history.**
- ☑ **Purchased six additional high value properties (in fee) and one easement. Provided money from the Duck Stamp fund to support two additional properties.**
- ☑ **Hosted an Aquatic Organism Passage Summit for state, federal and private natural resource organizations, and other partners to improve aquatic habitat connectivity throughout the state.**
- ☑ **Assisted VDEC and VTRANS in the development of standard management practices for instream construction to reflect aquatic habitat considerations and protections.**
- ☑ **Reviewed and provided input on approximately 285 development projects affecting aquatic habitat, and 198 affecting necessary wildlife habitat. More than 7,800 acres were protected or conserved.**
- ☑ **Provided watershed grants to fund 15 projects (totaling \$100,000) and SWG funds to help Vermonters protect, restore, and enjoy the state's watersheds, assess stream crossings and design aquatic organism passage enhancements.**
- ☑ **Worked with Trout Unlimited to complete strategic wood additions at approximately 60 sites, thereby improving trout habitat and stream geomorphology on approximately 2.5 miles of the Black Branch Nulhegan River.**
- ☑ **Worked with FPR and VTRANS to create new hibernacula, travel, and foraging cover for threatened North American racer snake.**
- ☑ **Implemented Board rule that defines uses of WMAs.**
- ☑ **Completed a landowner habitat management booklet.**
- ☑ **Co-hosted a regional conference with VTRANS, The Nature Conservancy (TNC), and other partners to promote habitat conservation and connectivity through modifications to transportation infrastructure.**
- ☑ **Co-instructed River and Roads Training workshops for state and municipal transportation staff to improve their understanding of the effects of transportation projects on river processes and aquatic habitats.**
- ☑ **Collaborated with VDEC and VTRANS to identify, secure funding, design and implement several post flood aquatic habitat restoration projects.**
- ☑ **Collaborated with VDEC and VFPR to finalize a Water Quality Certificate for the Waterbury Reservoir hydroelectric relicensing process and three projects on Otter creek to ensure protections to aquatic species and habitats.**
- ☑ **Developed a Hydroelectric/401 coordination and enforcement procedure.**



- ☑ Completed the “Vermont Habitat Blocks and Habitat Connectivity” report so that the habitat block data is available on the ANR Natural Resources Atlas.
- ☑ Identified significant natural communities at 15 sites in cooperation with landowners (SWG funding).
- ☑ Preserved three parcels of rare and declining sandplain forest as a result of the creation of a restrictive covenant template.
- ☑ Co-hosted a workshop with UVM Gund institute to explore the economic benefits of conservation actions.
- ☑ Instituted a training program to VTRANS regional staff to provide technical and conservation options for the resolution of beaver wetland/transportation infrastructure conflicts.

ONGOING:

- ☐ **Providing technical assistance to 13 towns directly and another 137 through partnerships, training, and workshops to promote planning for fish, wildlife and working lands.**
- ☐ **Providing SWG funds to angler and watershed organizations and technical assistance to state, federal and private partners to identify, design and implement aquatic organism passage improvements at road/stream crossings and dams.**
- ☐ Completing two large ongoing land acquisition projects:
 - Transfer of land at the state prison in Windsor to Fish & Wildlife (F&W).
 - Transfer of 3,000 acres at Herrick Mountain from The Conservation Fund to F&W.
- ☐ Participating in Wind/Solar/Gas/hydro energy proposal review (Vermont Yankee, Vt Gas, Conventry/Barton Solar) to minimize impacts to critical habitats and rare natural communities.
- ☐ Conserving 140 acres of deer wintering area, as well as securing \$195,000 in mitigation payments through intervention in Act 250 project review.

PROGRAM: Conservation of Fish and Wildlife Species

OUTCOME II: Conserve and restore Vermont’s fish, wildlife, and plant species to maintain ecosystem integrity for the benefit of the public.

COMPLETED:

- ☑ **Secured support and rule-making for the protection of threatened or endangered species, including, for the first time, three pollinators.**
- ☑ **Completed the first year of overwinter survival research for little brown bats at Acolus Cave, New England’s largest hibernacula, and began a second year of research.**
- ☑ **Increased catch rates and the size of salmon and lake trout as a result of fisheries management strategies including lamprey control.**
- ☑ **Implemented several Board rules to improve protection of fish and wildlife:**
 - Annual deer, moose, bear, and migratory bird season recommendations the Department worked with the Board to complete.
 - Restriction on the use of drones.
 - Falconry regulation.
 - Furbearer regulation to provide additional protections for lynx.
 - Closure and/or licensing of captive hunt facilities.
- ☑ Co-hosted a workshop celebrating the 40th anniversary of the Endangered Species Act with Agency and other partners.
- ☑ Brought the Bennington Veterans Home into compliance with state public trust doctrine. Worked with the Agency of Agriculture and personnel at the Veterans home to replace white tail deer with fallow deer recovered from Santa’s Land.



- ☑ Implemented a deer hunter survey in preparation for comprehensive deer management planning process.

ONGOING:

- ☐ **Implementing ten-year winter creel survey.**
- ☐ **Revising/updating Wildlife Action Plan for species of greatest conservation need (SGCN).**
- ☐ **Finalizing the comprehensive deer management plan.**
- ☐ **Finalizing fishing regulation changes for sauger and Batten Kill wild trout.**
- ☐ **Reviewing and updating the Northeast Fish Health Guidelines, a multi-state, multi-agency effort to develop a fish health management plan to address fish health management practices and the importation and transfer of fish. Will ultimately have long reaching benefits to wild fish populations in Vermont as well as the Northeast.**
- ☐ Continuing the successful work to restore the down-listed populations of loon, peregrine and osprey populations.

PROGRAM: Public Support for Land Conservation

OUTCOME III: Increase the public's support and understanding of land conservation issues and promote and facilitate a land stewardship ethic in Vermont.

ONGOING:

- ☐ **Established partnership with WCAXTV to inform the public about the importance of habitat and conservation actions.**
- ☐ **Transitioning/updating website to improve public access and understanding.**
- ☐ **Working to increase public support of conservation through the Nongame Wildlife Fund, which experienced a 25 percent increase in donations via the Vermont income tax check-off in 2014.**
- ☐ Implementing a public survey to measure public support for Department conservation actions and measure strategic plan indicators.
- ☐ Implementing a special week-long free camp session for children of military parents.
- ☐ Maintaining and enhancing a public land ethic, already particularly strong in Vermont, to ensure the perpetuation of the Department mission.
- ☐ Working to maintain Vermont's participation in wildlife-related activities, including hunting, fishing, trapping, wildlife watching and others, which is currently second highest among the U.S. states.

GOAL B: Provide a diversity of quality fish and wildlife based activities and opportunities that allow the safe and ethical viewing, regulated harvesting, and utilization of fish, plants, and wildlife resources, and which increase people's understanding about the protection, conservation, and sustainable use of Vermont's wildlife resources and natural communities.

PROGRAM: Hunting, Fishing, Trapping Opportunities

OUTCOME IV: Provide a diversity of harvest opportunities, consistent with resource management goals and within ecological limits.

COMPLETED:

- ☑ **Upgraded five boat ramps and two docks at seven fishing access areas across the state.**
- ☑ **Purchased one new access area on Lewis Creek in Hinesburg and established another on Lake Champlain.**
- ☑ **Held the first Free Ice Fishing Day festival.**
- ☑ **Increased opportunities for year-round fishing for bass and trout.**



- ☑ **Resumed Island Pond inland walleye stocking.**
- ☑ **Partnered with four sportsmen's organizations to rear fish for stocking into state waters (Lake Champlain Walleye Association, Vermont Fish & Wildlife Conservation Group, Hale Mountain Fish & Game Club, Orleans Rod & Gun Club)**
- ☑ **Improved fish rearing infrastructure at fish culture stations to improved fish production and survival:**
 - Constructed additional trout rearing infrastructure at the Bald Hill hatchery.
 - Increased trout survival at the Bennington hatchery by 20 to 30 percent by installing measures to prevent bird predation.
 - Installed a new fish trap at Ed Weed hatchery, yielding a better salmon collection and an improved condition of fish returned to Lake Champlain following spawning.
- ☑ Documented the second highest attendance at Grand Isle Family Fishing Festival.
- ☑ Developed procedures for Department input on use of public waters.
- ☑ Doubled the egg survival of stocked triploid brook trout by changing spawning protocol.
- ☑ Expanded opportunities for disabled veterans to participate in hunting and fishing by offering free permanent licenses.
- ☑ Completed Buck Lake and Hammond's Cove shooting ranges.

ONGOING:

- ☐ **New and ongoing seminars for first-time hunters to encourage future support for fish and wildlife conservation and management and maintain Vermont's cultural heritage.**
- ☐ **Implemented partnership/grant with Lake Champlain International (LCI) to oversee Let's Go Fishing program, which reaches nearly 6,000 participants annually.**
- ☐ **Addressing the long-term challenge (common to agencies across the country) of participation and sustainable funding by engaging in a new marketing and outreach effort to bring in new and lapsed anglers and hunters, and those interested in the most sustainable, local, organic and healthy meat available.**
- ☐ **Monitoring the fish population responses on Berlin Pond and Stiles Pond, both recently opened for public access and fishing.**
- ☐ **Working to improve accessibility at fishing access areas around the state.**
 - Working with Burlington to successfully implement a \$1.5 million federal grant to improve boating infrastructure at Perkins Pier.
 - Completing acquisition of fishing/boating access area at Great Hosmer Pond to guarantee future public access.
- ☐ Working on the Roxbury hatchery rebuild.
- ☐ Completing private land donations of critical fish rearing ponds to help ensure continued production of quality fish for stocking into state waters.

GOAL C: Limit harmful or fatal encounters with fish and wildlife species, and provide general public safety service incidental to our primary fish and wildlife duties.

PROGRAM: Human Safety from Wildlife

OUTCOME VII/VIII: Limit the number of human injuries and fatalities that result from encounters with wildlife or participation in fish and wildlife based recreational activities and maintain full response to requests for assistance.

COMPLETED:

- ☑ **Reduced major firearm related hunting accidents to zero in 2014.**
- ☑ Certified almost 5,000 students in hunter, bowhunter and trapper education.



ONGOING:

- Developed a protocol and have begun the training of two teams (biological and LE) to address human/wildlife conflicts with bear, moose, lynx, and large canids.**
- Respond to 580 human/rabies conflicts.**
- Responded to more than 200 reports of bats in buildings in 2014 and provided technical assistance to homeowners, as well as training to nuisance wildlife control operators, Health Department rabies lab technicians and game wardens.
- Cooperate with Health Department to monitor/sample tick populations at deer harvest reporting stations.

GOAL D: Efficient operations and effective management of the Fish & Wildlife Department.

PROGRAM: Efficient Operations and Effective Management

COMPLETED:

- Streamlined the annual bag limit and permit processes for moose, deer and migratory bird hunting to reduce the costs of rulemaking and provide better customer service to hunters.**
- Implemented/streamlined a transparent operational planning process to tie priority actions to the budget and performance indicators.**
- Developed and implemented three new conservation plates that underscore the importance of protecting nongame species, improving local streams, and supporting conservation education. Expect to increase the currently registered 5,699 conservation plates through this effort.
- Installed a solar panel array at the Bald Hill hatchery that currently is supplementing 75 percent of the hatchery's energy needs.
- Implemented energy efficiency projects in hatcheries through SRMRF loan program and over the last three years, have reduced operating budgets by \$80,000 annually.
- Staffing:
 - Reestablished seasonal staffing for fish culture stations to a sustainable level.
 - Filled two vacancies in fish division.
 - Filled warden vacancies so that warden force is at the highest staffing level in recent history.
 - Procured and filled three limited service positions to increase capacity including: a small mammal biologist position with a focus on bat conservation; a database manager; and a shooting range manager {all previously long-term temporary employees}.
- Significantly reduced length of truck rotations improving staff safety and efficiency and purchased more energy efficient vehicles.
- Developed a project review protocol for Stream Alteration and Title 19 projects.

ONGOING:

- Implementing the Point of Sale (POS) licensing system. This is the first year that most licenses were sold on-line or through POS and for the first time 73 percent of the harvest reports were entered electronically saving staff time and money.**
- Planning future solar projects at several fish hatcheries around the state.
- Continued utilization of the State Resource Management Revolving Fund (SRMRF) Loan program to implement energy efficiency projects at conservation camps and fish hatcheries.
- Provide continued input on design and eventual construction of a new collaborative laboratory complex that will include the fish health lab.

