

Rhode Island Department of Environmental Management

Division of Fish and Wildlife

Overview of Programs & Responsibilities

Wildlife Section





DEM
RHODE ISLAND



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

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TABLE OF CONTENTS

INTRODUCTION

Our Mission.....	3
Hunters and Hunting in RI.....	4

SPECIES RESEARCH & MANAGEMENT

Birds	5
Upland Game Birds.....	6
Waterfowl	8
Mammals.....	12
Non-game, Threatened, & Endangered Species	16
Reptiles & Amphibians	18

HABITAT CONSERVATION & MANAGEMENT

Habitat Program Overview.....	19
Wetland Habitat.....	21
Upland Habitat.....	23

TECHNICAL ASSISTANCE & OUTREACH

Technical Assistance & Management	25
Outreach & Education	26

POLICY & PERMITTING

Hunting & Trapping.....	31
Handgun Safety.....	32
Land Management	32
Wildlife	33

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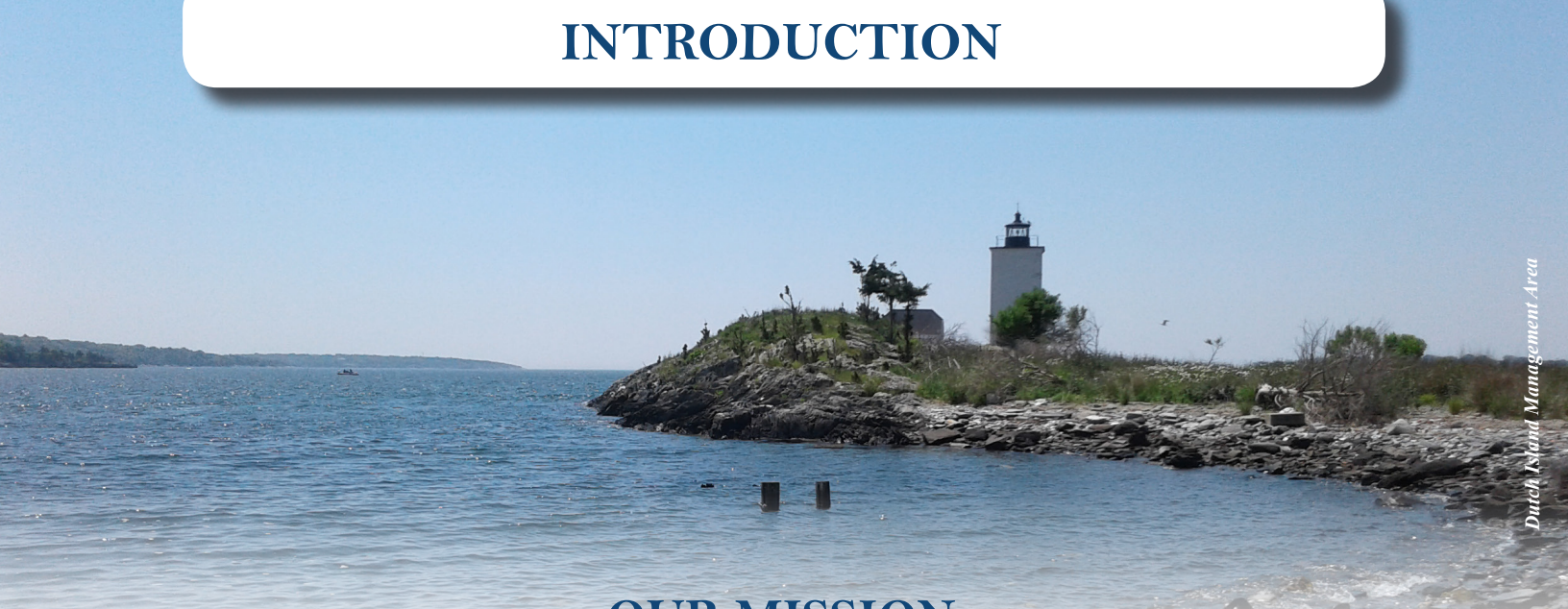
Above: Arcadia Management Area

Cover photo: Durfee Hill Management Area

Cover, left to right (top): Pileated woodpecker (G. Krausse), White-tailed deer (D. Birch), Painted turtle, Common eider

Left to right (bottom): Smooth green snake (C. Raithel), Red fox, Barred owl (P. Green), Spring peeper (C. Raithel)

INTRODUCTION



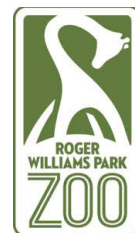
OUR MISSION

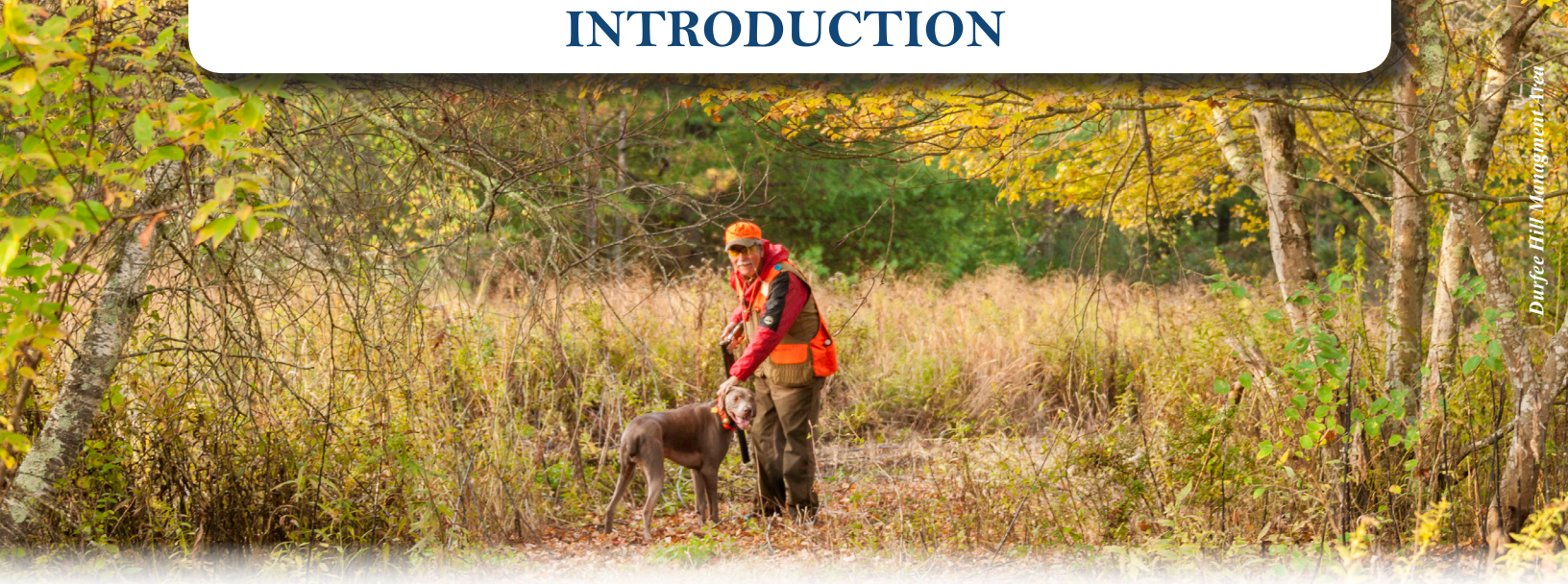
“Our mission is to ensure that the Freshwater, Marine, and Wildlife Resources of the State of Rhode Island will be conserved and managed for equitable and sustainable use.”

The Division of Fish and Wildlife (DFW) Wildlife Section protects, restores, and manages the wildlife resources of the state. The DFW shares management responsibility of more than 60,000 acres of land, including 25 State Management Areas, and is responsible for thousands of species of wildlife. We serve a wide and diverse segment of the public from outdoor recreationists (e.g., hunters, hikers, mountain bikers, wildlife watchers) to the general public (e.g., backyard birders, public concerned with nuisance wildlife, municipalities, legislators).

In addition to the DFW duties named above, we are responsible for the State’s public hunter education programs and overseeing all hunting and trapping in the state. This includes setting seasons, size limits, methods of take, and daily limits for the harvest of all wildlife species, including, but not limited to, white-tailed deer, upland game birds, waterfowl, and small game species (coyote, squirrel, cottontail, etc.).

The DFW is primarily funded through the Federal Wildlife and Sport Fish Restoration (WSFR) Program, which is administered through the United States Fish and Wildlife Service (USFWS). The largest pot of money under the WSFR Program uses taxes placed on firearms, ammunition, and archery equipment to help fund state fish and wildlife programs. **There are over 9,000 licensed hunters in Rhode Island, whose license revenue is used to match the federal funds.** Annual appropriations for WSFR’s State Wildlife Grants (SWG) Program provide an additional, smaller, yet less restricted pot of money that can be put toward conservation of all Species of Greatest Conservation Need (SGCN) as identified in the RI Wildlife Action Plan. WSFR funding is used to monitor populations of the state’s deer, turkey, waterfowl, and other game animals, as well as to maintain hunting areas and provide a shooting range for the public at Great Swamp Management Area. This funding also assists in land acquisition for the DFW, helping to secure valuable habitat for wildlife, both game and non-game species, in perpetuity. This report is a compilation of the wildlife section’s projects, including those that are conducted in conjunction with outside organizations. **The wildlife section of the DFW has 9 state full time employees, and approximately 10 seasonal technicians per year.** We are responsible for species research, monitoring, and management, habitat conservation and management, public access, technical assistance and outreach, and policy and permitting. We also partner with these outside organizations for species research, land acquisition, habitat restoration, and more:





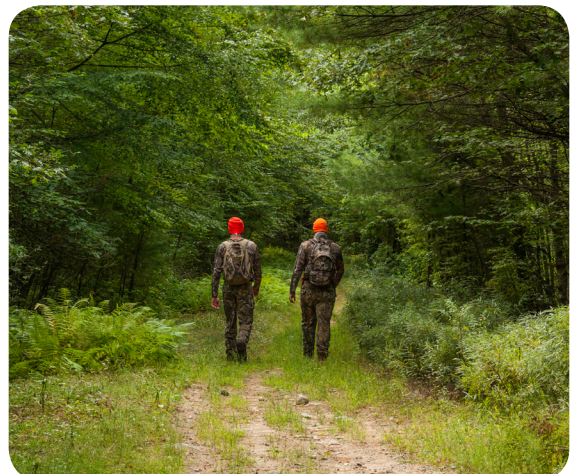
HUNTERS & HUNTING IN RHODE ISLAND

The primary constituents for the Division of Fish and Wildlife are the people who hunt and fish in Rhode Island. For the Wildlife section, it is the hunters of the state who not only contribute to our federal funding program with their purchase of hunting equipment and firearms, but also by buying Rhode Island state hunting licenses and permits. The revenue from licenses and permits provides match to the federal funding to support almost all of the conservation work the Division conducts in the state and described in this document.

We provide licensed individuals the opportunity to hunt and trap a variety of game species, including, but not limited to, waterfowl, upland game birds, deer, turkey, furbearers, and other small game. The DFW annually promulgates hunting and fishing regulations and prints magazines for hunting and fishing that summarize the regulations and provide additional information for all allowable activities. We are also available to answer questions from the public regarding the regulations, hunting on state property and other hunting or trapping related questions.

In 2018 there were 9,128 hunting and trapping licenses sold in Rhode Island using our new online licensing system. The majority (83%) of those license holders were Rhode Island residents and 17% were non-residents. Less than two percent of license holders are trappers.

The revenue generated by the sale of licenses and permits for hunting in Rhode Island is significant and provides match funding for our federal dollars. The majority of the funds come from resident hunters, and within that category permits generate the most. In fact, resident permits, which primarily include deer tags, turkey permits, and upland game permits represents about half of the money raised each year.





Great egrets and snowy egrets, G. Krausse

BIRDS

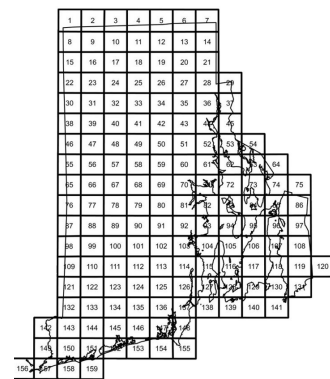
The Rhode Island Bird Atlas

The initial Rhode Island Breeding Bird Atlas (RIBA 1.0) was completed by 68 volunteers from 1982-1987, with 164 species documented and 155 species confirmed as nesting in Rhode Island. The ongoing Rhode Island Bird Atlas 2.0 (RIBA 2.0) will collect information from 2015-2019 replicating similar methods used in RIBA 1.0. In addition, novel datasets on breeding/wintering distribution and abundance and migration dynamics are being collected. This is a unique initiative never before attempted by any other atlas projects.

The RIBA 2.0 atlas has been a collaborative effort with the University of Rhode Island (URI), and consists of five efforts: the volunteer breeding atlas, the breeding abundance atlas, the winter atlas, the migration atlas, and the nocturnal atlas. This is an enormous and greatly informative project, which would not be possible without the dedication of our volunteers!



3,750 point count stations visited during the breeding season



165 atlas survey blocks

Migratory Bird Coordination and Management

Due to the highly mobile migratory nature of bird species and the need to manage large populations across political borders, regional and continental monitoring, management, and coordination is conducted to ensure sustainable populations. The DFW is a key member of the Atlantic Flyway Council (AFC). We participate fully in many issues related to the Atlantic Flyway Technical Section, Black Duck Joint Venture, and the Atlantic Coast Joint Venture. This includes attending the fall meeting in Annapolis, Maryland and the winter meeting in Cape May, New Jersey. We also participate in the Atlantic Flyway Council, Atlantic Coast Joint Venture, Black Duck Joint Venture, and the Sea Duck Joint Venture Management Board. Time is spent reviewing management plans, research proposals, attending meetings, and reviewing minutes and other documents from each group. We also receive federal Migratory Bird permits from the USFWS to be co-signed. **An average of 25 permits are issued each year (data from 2010-2018).**



Bird Atlas volunteer conducting a survey



American woodcock, R. D'Andrea

UPLAND GAME BIRDS

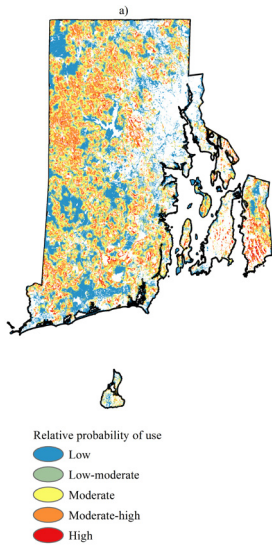
American Woodcock and the Management of Rhode Island Forests

The DFW and URI have worked together for almost 10 years to study how forest management affects the movement and habitat use of the American woodcock, a migratory bird of conservation concern and a popular game species in the Northeast. Although woodcock are a shorebird by heritage, they largely avoid beaches, and instead mostly inhabit young, early-successional forest in the eastern U.S. In the absence of natural disturbance, woodcock require some type of forest management to thrive, and our collaborative research has focused on where and what type of forest management is best for woodcock and other associated wildlife.

An early essential task was to map existing forest types in Rhode Island. We have tracked over 100 woodcock using radiotelemetry to determine their movements and habitat requirements and to create a map predicting which locations woodcock would use in Rhode Island. This probability of use map is currently being used by the DFW and the Natural Resources Conservation Service (NRCS) to guide forest management on public and private lands - in short, it shows where forest management can get the best “bang for its buck.” This work also found that young forest habitat created for woodcock benefits other wildlife, including other migratory bird SGCN. We recently validated and tested this model of woodcock resource use by conducting a relocation experiment. Male woodcock were transplanted between managed RI DEM areas that were classified as high- or low-likelihood of use. The woodcock in our study overwhelmingly selected and returned to landscapes that ranked higher in likelihood-of-use. **These findings are particularly relevant for the management of young forests within RI, as it emphasizes the importance of creating new habitat within landscapes that are already favorable to woodcock, and in close proximity to other managed young forest areas.**

We can now update the location and spatial extent of young forest habitat selected by woodcock, determine the changes in young forest habitat over time, update the woodcock habitat-use model, and prepare a statewide map with ratings of how much a new clear cut in any location would improve the suitability of the area for woodcock. We have also created the first citizen science-based, state-wide survey of woodcock distribution and abundance. Once established, this project will provide a regular population survey of woodcock and better understanding of woodcock resource use in relation to forest management.

R. Maise



Habitats ranked based on their probability of use by male woodcock



Ring-necked pheasant

UPLAND GAME BIRDS

Pheasant Stocking Program

Pheasant hunting has been a very popular program in Rhode Island and can be an excellent gateway to hunting for beginners and youth. **To support hunting opportunities for existing and new hunters, we manage habitat and stock pheasants at 11 management areas each fall.** Coordination of the pheasant stocking program includes ordering birds, scheduling stocking dates and locations, transporting birds across the state to release, operating check stations, ordering seed for planting food plots, reviewing tag sales, and reporting harvest. This program requires significant staff effort, but always receives great feedback, which is very rewarding.

Mourning Dove Program

Mourning dove hunting, likewise, provides an excellent opportunity for hunters to become engaged in the hunting experience. **To provide population and harvest data, and to ensure sustainable dove seasons for the future, we conduct call surveys and banding of mourning doves each August.** The annual call count census follows protocols established by the United States Fish & Wildlife Service (USFWS) for surveys conducted since 1969. This large-scale and long-standing monitoring effort facilitates better regional mourning dove population management decisions.

Wild Turkey Survey

After decades of population decline and subsequent reintroduction efforts, Rhode Island's wild turkey population has increased in recent years. **Our state wild turkey population is robust and stable enough to support carefully managed spring and fall turkey hunting seasons.** Several methods are used to monitor and determine the status and distribution of wild turkeys in the state, including a spring gobble count survey, summer brood data collection via an online citizen science survey, and spring and fall hunter surveys. Beginning in 2018, all turkeys are checked using the new online licensing and harvest reporting system. This convenient new system alleviates the need for hunters to mail in a kill report card, while saving on printing, postage, and data entry costs for the DFW. All of these efforts ensure that we have enough information to guide hunting season dates and bag limits, and guarantee a stable and healthy turkey population for years to come.



Seasonal staff band mourning doves



Wild turkeys



WATERFOWL

Waterfowl Banding and Tracking Study

Bird banding has a long and valuable history. **Information gained through these efforts (e.g., survival, productivity, age, sex distribution) are critical variables used in models that guide the management and conservation of waterfowl.** Banding information is particularly important for the management of waterfowl as we gather productivity estimates and harvest demographics to annually assess population levels and guide management decisions regarding season lengths and bag limits. We conduct two major waterfowl banding projects per year. The first focuses on American black ducks and occurs during the frigid months of January and February. The second focuses on Canada geese and happens during the months of June and July when geese are molting and therefore flightless. This project requires considerable staff time in the field, and requires the help of most of the staff. Both of these efforts are in coordination with the AFC's regional efforts to manage these highly mobile species.



Winter American black duck banding

Environmental Effects and Disease Mortality of Birds

Environmental effects and wildlife disease monitoring is important to gauge population level and ecosystem health, as well as to protect humans from any potential threats. Biosecurity of the public is predicated in part on monitoring and managing any harmful zoonotic diseases. As such, the DFW takes steps to educate and mitigate. **A proactive approach to limit the spread of disease is to deter communal feeding. Supplemental feeding is largely unhealthy for birds because it increases dependence on humans, can make individual animals sick, and encourages animals to congregate, which in turn can create conditions conducive to the spread of zoonotic disease.** Wildlife and public health are of utmost importance to us. With that in mind, we have continued outreach in the form of "Don't Feed the Waterfowl" signs to the public and municipalities upon request. Information regarding avian influenza is also provided to the public in the annual waterfowl hunting guide.



WATERFOWL

Mute Swan Study

The non-native mute swan is an aggressive invasive species that negatively impacts resource availability for native waterfowl species. To mitigate the effects of the mute swan population on native waterfowl, we have taken several measures. Aerial surveys are conducted in April, and boat and ground-based surveys in August/September to obtain breeding density estimates and brood production of mute swans in Rhode Island. Ground truth surveys are then used to collect nesting and egg laying effort at sites identified during the April aerial survey. Lastly, egg oiling is implemented to limit the expansion and spread of the feral swan population. **Data collected during these surveys indicates a decrease in nesting activity of mute swans, and in the number of adult mute swans during the August molt period.**

Waterfowl Survey and Monitoring

During the first two and a half weeks of May, we conduct our annual waterfowl breeding plot survey. We survey 19 traditional 1-km² plots, and data is reported to the Division of Migratory Bird Management. A second Mid-Winter Survey is completed in January. The data collected during these surveys is critical to understanding how to best manage habitat and resources for healthy waterfowl populations in the state. **Data from the 2018 survey yielded a waterfowl count in the coastal zone of Rhode Island that was higher than 2017 and 46.2% above the 10-year average.**



Wood duck nest box along the Wood River

Wood Duck Nest Box Study

Wood ducks are a popular species among hunters and bird watchers alike. These birds naturally nest in tree cavities, but will readily use nesting boxes. To increase the amount of habitat available to wood ducks, we work with volunteers across the state to replace, build, and install wood duck nest boxes. Beginning in mid-summer and continuing through March, boxes at 91 waterbodies are inspected for nesting evidence. **Currently, there are 289 boxes placed around the state.**

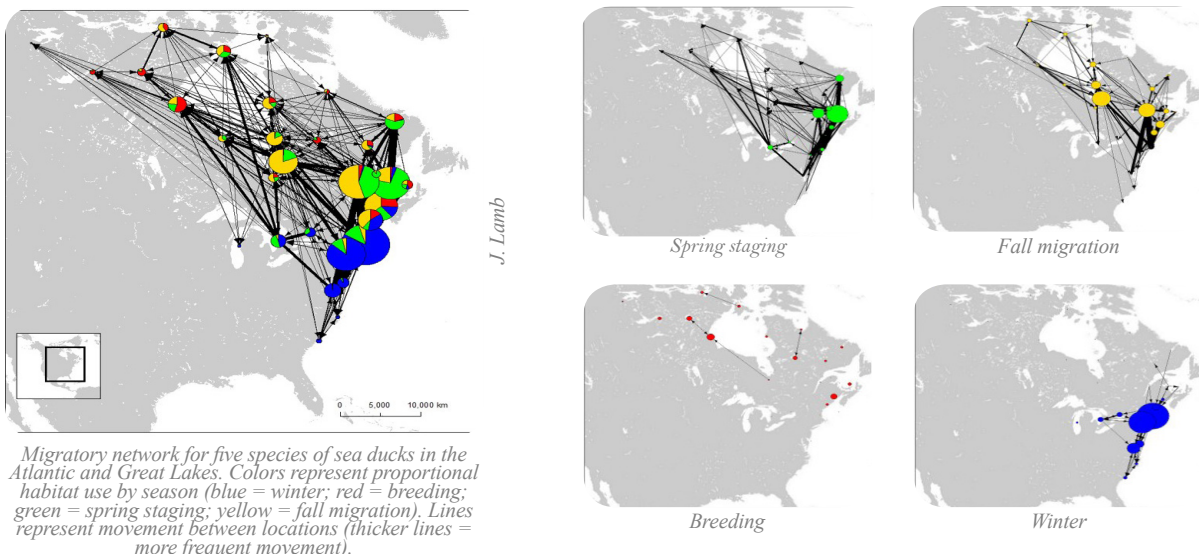


WATERFOWL

Atlantic and Great Lakes Sea Duck Migration Study

Rhode Island's coastline and the Narragansett Bay provide key wintering habitat for many species of migratory sea ducks. In recent years, several sea duck species have experienced significant population decline. Since 2010, the Atlantic and Great Lake Sea Duck Migration Study, in coordination with the USFWS Sea Duck Joint Venture, has tracked local and regional movements of these high-priority sea ducks in eastern North America using satellite transmitters. This partnership has involved DFW staff and URI researchers, along with state, U.S. federal, and Canadian agencies throughout eastern North America. **Combined with individual efforts by research partners dating back to 2002, this project has resulted in one of the most comprehensive datasets on long-distance movements of five species of waterfowl (common eider, black scoter, surf scoter, white-winged scoter, and long-tailed duck), with over 200,000 locations from 672 individuals.**

To date, we have focused on species-specific and within-season movements; however, the dataset also provides a unique opportunity to examine and compare year-round movement patterns across species, and to identify key sites with broad conservation importance. In the future, we plan to use telemetry data to analyze how individual species share resources in common habitat areas and identify important landscape features selected by sea ducks during different seasons. This will help guide strategies for conserving sea duck habitats and populations in eastern North America.



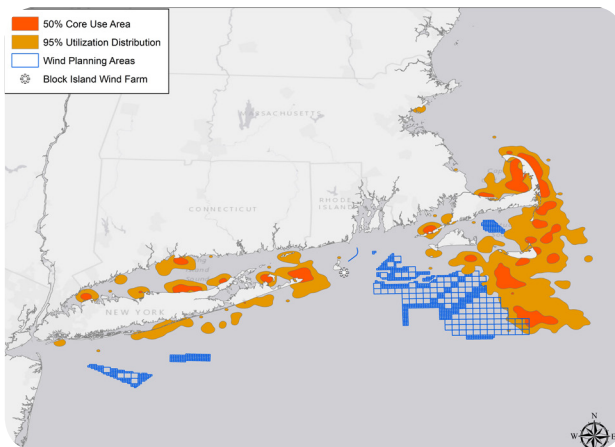


WATERFOWL

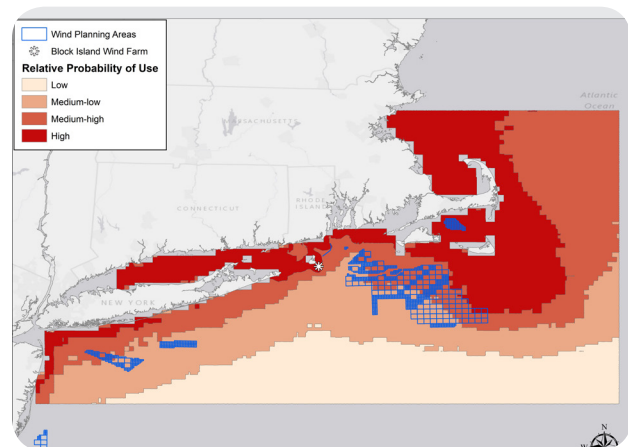
Winter Habitat Use of White-winged Scoters in Southern New England

White-winged Scoters are a long-lived, migratory species that winter along both the Atlantic and Pacific coasts of North America and breed throughout the interior boreal forest from Alaska to central Canada. **The Rhode Island coastline provides critical winter habitat for this species.** The continental population of white-winged scoters has experienced a long-term decline throughout the last half-century. They remain one of the least-studied waterfowl species, thus management and conservation efforts have been impeded by a lack of vital life history information. **Concern over the potential impact of offshore wind energy on sea duck populations has led to efforts to develop models to understand their distribution, habitat use, and site fidelity.**

This project, in collaboration with researchers at URI, uses satellite telemetry to document timing of movements, resource selection, and habitat use patterns of white-winged scoters in southern New England. This combined information also helps to identify key locations and times when white-winged scoters may be vulnerable to ecological impacts from offshore wind energy development.



Winter distribution and core use areas of white-winged scoters implanted with satellite transmitters, in relation to current and proposed offshore wind energy areas.



Probability of use predicted for white-winged scoters across the southern New England study area in relation to current and proposed offshore wind energy areas.

D. Meatley



White-tailed deer, James P. Daptram

MAMMALS

White-tailed Deer

The DFW is responsible for many aspects of managing deer across the state. The main method of managing deer is through regulated hunting; data is collected during the hunting season at staff-operated check stations and through harvest reports. This is one of our greatest opportunities to interact with our constituent hunters. Hunting regulations must be set annually regarding the harvest of deer, and regulations must be updated and published to reflect changes in technology, research, and deer population levels. As regulations are updated, there is a need for updated legislation to strengthen existing laws pertaining to humans and wildlife health. Currently, we estimate deer population size through aerial surveys flown during the winter, and through deer-vehicle collision data. **Our deer program is undergoing a restructuring period, developing new trend indices, population estimates, and population models that will be used in the decision-making process to manage deer responsibly.** New surveys are being developed to strengthen our knowledge and confidence about the status of Rhode Island's deer population.

Chronic Wasting Disease Monitoring

Chronic Wasting Disease (CWD) is a devastating neurological disease that affects deer, moose, and elk across North America. Monitoring and preventing the spread of CWD has become a major priority of deer biologists across the nation. **Though CWD has not yet occurred in Rhode Island, we have taken measures to closely monitor for it to protect the health of our state's deer population. Biological samples (lymph nodes) are tested from road killed and hunter-harvested deer each year.** A collaboration with the Division of Law Enforcement (DLE), meat processors, and taxidermists, and hunters has enabled us to receive and process a large number of samples. A CWD prevention and response plan is being created in order to safeguard our deer population, hunting culture, and future of wildlife management in Rhode Island.



A volunteer ages a harvested deer



Big brown bat

MAMMALS

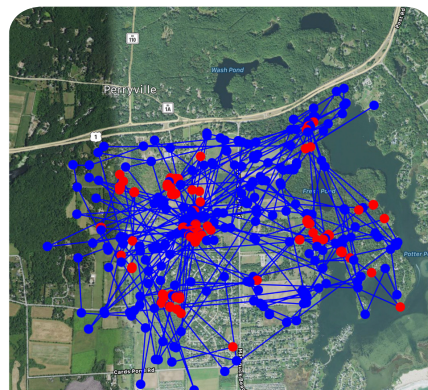
Bats and White Nose Syndrome

With the outbreak of white-nose syndrome and the subsequent catastrophic declines of numerous bat species in eastern North America, bats as a group have come to the forefront of conservation interest and efforts. **Prior to the implementation of this project in 2010, very little information existed regarding bat species in Rhode Island. We have adopted a variety of survey methods to try to get a better understanding on what species occur in the state, their relative abundance, and other basic questions.** Maternity roost exit counts, mobile acoustic surveys (driving transects with a bat detector mounted to a vehicle), and passive acoustic surveys (bat detector deployed in one location for a period of time) are all proven survey methods and implemented by a number of jurisdictions. Additionally, we conduct mist netting surveys on state lands and collect bat specimens from the state rabies lab (~300/year) to determine and document species that might be rare or otherwise difficult to obtain. We also survey various man-made structures that we have now learned are used by bats as hibernacula.

Coyote Tracking and Management

Since coyotes expanded their distribution to Rhode Island in the 1960s, they have been increasingly on the public radar as their populations have grown. Coyotes now occupy most natural habitats and have become a presence in urban areas as well. As the population has grown, so have human-coyote interactions, which often incite public calls for lethal management. Across the country lethal control has been repeatedly demonstrated to be ineffective. Coyote populations rapidly bounce back to levels sustainable by the food resources present. **Since research began in 2005, the Narragansett Bay Coyote Study (NBCS) has determined that hundreds of thousands of pounds of anthropogenic food subsidies are being provided to RI coyotes each year. Food subsidies increase both coyote population size and habituated (bold) behavior, exacerbating human coyote conflicts.**

Now partnered with the DFW and USFWS, the NBCS team will be able to conduct food removal experiments to determine what happens to packs of coyotes when anthropogenic subsidies are removed. Using GPS tracking collars, and customized iOS tracking apps, we will be able to observe changes in territory size, pack size, urban habitat use, and more. The study's narrative, updates, maps, photos, and films, will involve and inform the public as we conduct this live experiment and learn to safely and sustainably coexist with coyotes in RI.



N. Mitchell

Top: Territory of "Ghost" (Coyote 44568) shown by his GPS points and travel paths in Matumuck, RI

Bottom: Dr. Numi Mitchell and Dr. Ralph Pratt preparing to release a collared coyote



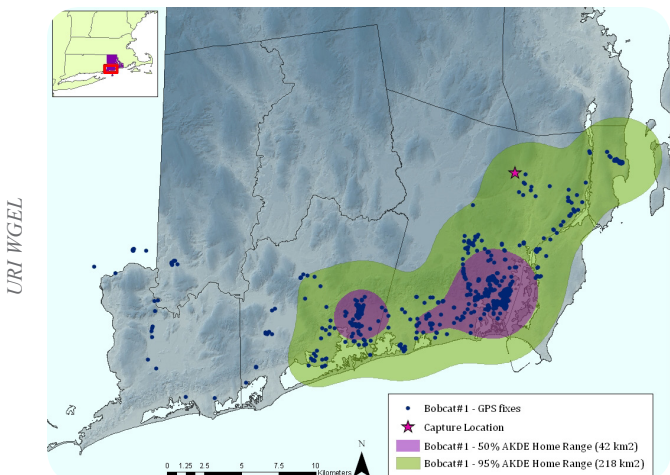
Preparing an anesthetized bobcat for collaring, URI

MAMMALS

Bobcat and Black Bear

Bobcat and American black bear are both charismatic species that attract widespread public interest. In Rhode Island they are both SGCN, and their abundance appears to be on the rise. American black bears pose a significant challenge to wildlife managers, as they may cause considerable damage to private property, agricultural products, and livestock. An early detection and monitoring system is needed to determine the number of American black bear that are entering RI from neighboring states and to detect if and when reproduction is occurring in the state. To learn more about black bears in RI, we have set up black bear hair stations around the state to catch hair samples from passing bears in order to gather genetic data.

The reasons for the increase of bobcat in RI are not well understood. To understand the reason(s) for the increase in bobcat populations, and to understand the impact of bobcat on the RI ecosystems, managers must understand the habitat requirements of this species, both in terms of vegetative requirements and prey base. **To address these uncertainties, the DFW and the URI Wildlife Genetics and Ecology Laboratory (WGEL) have collaborated on a project to determine bobcat abundance, movements, and home range size in RI through the use of GPS collars on captured and released bobcat, and trail cameras set around the state.** As a side benefit, our bobcat and bear studies will provide valuable information about the occupancy of other mammals in RI.



Home range and core area for male bobcat #1



An American black bear walks by one of our trail cameras



New England cottontail on Patience Island, USFWS

MAMMALS

New England Cottontail

The New England cottontail (NEC) is a native rabbit to the Northeast, and was recently a candidate for listing under the Federal Endangered Species Act. Potential causes for NEC decline include loss of habitat, predation, and competition with the non-native Eastern cottontail. Locally in Rhode Island, NEC have dramatically declined in distribution and abundance since the 1980s. Currently, the NEC is listed in RI as a SGCN and is the focus of a large coordinated effort to conserve the species. The DFW and the URI WGEL work collaboratively to help conserve NEC locally and regionally. The URI WGEL is also the lead genetics laboratory that supports the regional effort to document the distribution of NEC. As part of this regional restoration effort, we are attempting to:

Determine and monitor the status, distribution, and abundance of cottontails in RI;

Extensive surveys to detect NEC in RI (based primarily on the genetic species identification of fecal samples) have only detected four NEC locations in RI from the period of 2011 to 2014. Genetic methods have also been used to estimate the abundance of NEC at Great Swamp Management Area and Patience Island.

Monitor survival and home range of a NEC breeding colony on Patience Island and at new release sites within RI;

Since 2012, 74 NEC bred at Roger Williams Park Zoo have been released on Patience Island, and 51 NEC have been translocated from the island to mainland sites in RI and NH. The Patience Island population has been estimated at two different time periods using genetic methods and appears to be stable. The survival of released NEC has been monitored using very high frequency “pulse collars” and receivers that pick up collar signals and indicate mortality when a signal location becomes stagnant. In 2018, 10 NEC were released on the Patience Island with GPS collars to determine their home range and movements. In RI, a total of 56 NEC were released at Great Swamp Management Area in 2016 and 2018 in an effort to re-establish a mainland population. Nine of the recently released NEC were fitted with GPS collars to determine their home range.

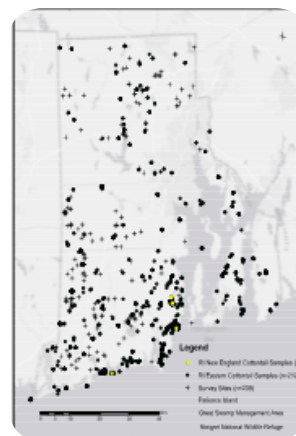


NEC being fitted with a radiocollar

In RI, a total of 56 NEC were released at Great Swamp Management Area in 2016 and 2018 in an effort to re-establish a mainland population. Nine of the recently released NEC were fitted with GPS collars to determine their home range.

Monitor the habitat use at NEC translocation sites and determine which species of vegetation are selected by NEC released in RI; Compare the diet of New England cottontail and eastern cottontail;

The comparison of the diet of NEC and eastern cottontail at mainland sites in the Northeastern U.S. has shown that they have a similar diet. The diet of NEC on Patience Island has recently been documented and will be compared to mainland cottontails.



URI WGEL

Cottontail fecal samples collected from 2009 - 2017



American burying beetle, USFWS

NONGAME, THREATENED, & ENDANGERED SPECIES

The state of Rhode Island, in cooperation with the Rhode Island Natural History Survey, maintains a list of state-endangered, threatened, and special concern animal and plant species. The list offers only limited protection to these species, but it also helps set priorities for environmental regulation, land acquisition, and other conservation actions statewide. **The work to establish priorities and plans for species conservation in Rhode Island has been ongoing since 1980, when this cooperative agreement with the USFWS was established.** Continued survey, monitoring, and conservation planning efforts are essential to ensure the long-term viability of several state-endangered and threatened wildlife populations in Rhode Island.

American Burying Beetle

The American burying beetle was once widespread across the eastern United States and Canada, but population declines eventually limited this species to two extant populations, one in eastern Oklahoma and one on Block Island, Rhode Island. As a result, it was listed as an endangered species by the USFWS in 1989. Since then, several agencies have partnered to conserve the remaining populations and to captive breed individuals with the goals of reintroduction. The American burying beetle feeds off of carcasses of small to medium sized animals. It is thought that one cause of decline is the lack of ideally sized carcasses, most notably the extinction of the passenger pigeon, and the loss of carcasses to competitors like raccoons, opossums, and crows. **Each summer, we monitor the Block Island population through pitfall traps and mark and release. We also provide carrion during peak reproductive season and ideal habitat On Block Island.** This habitat also benefits other species of concern, like the American woodcock, upland sandpiper, and fritillary butterfly.

Piping Plover

The piping plover has been known to nest in Rhode Island since the earliest ornithological records were kept. At the time of its listing as Threatened by the USFWS in December 1985, only about 10 pairs of piping plovers were nesting in the state at 5 locations, probably the lowest population level since 1940. Nesting plovers were suffering from habitat destruction, as well as from poor recruitment due to disturbance and depredation of eggs and young. **After nearly 25 years of very intensive management and education, the statewide nesting population now exceeds 90 pairs.** Annual monitoring and management begins when birds arrive on nesting territories in late March and early April, and is conducted by USFWS and TNC staff. Territories are pre-fenced and posted with signage to reduce pedestrian and vehicular traffic, thereby creating disturbance-free areas. When nests are established, the clutches are generally covered with predator exclosures according to recovery plan protocols. Monitoring continues until the chicks fledge and leave the nesting areas in July. Results are tabulated annually and include number of nesting pairs and their locations, schedule of nesting, hatching and fledging rate, and problems noted during the season.



Signage and symbolic fencing for nesting piping plovers and least terns



Glossy Ibis on Rose Island, G. Krause

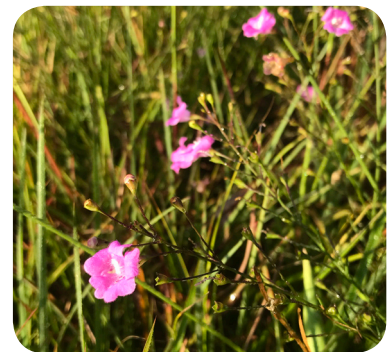
NONGAME, THREATENED, & ENDANGERED SPECIES

Colonial Nesting Water Birds

We have annually monitored bird colony sites within Narragansett Bay for more than 20 years, which has resulted in a wealth of population trend information and long-term data unique to the northeastern United States. Most of these birds were persecuted for food or plumage during the North American gunning era, which effectively ended with federal protection of migratory birds with the passing of the Migratory Bird Treaty Act in 1918. At that time, the northeastern populations of many species were severely reduced or had been absent for many decades. Following protection, these species began to recover and recolonize their historical nesting range in the northeast, some reaching Rhode Island again only recently. Although persecution was responsible for declines in the 1900's, these species now face a variety of threats related to disturbance at colony sites and loss or degradation of foraging habitat. The current objective of this project is to collect nesting data annually for populations of certain colonial water birds, including the families Ardeidae (black-crowned night heron, snowy egret, great egret, little blue heron, cattle egret), Threskiornithidae (glossy ibis), Phalacrocoracidae (double-crested cormorant), and Laridae (herring gull, great black-backed gull, common tern, least tern).

Sandplain Gerardia

Sandplain gerardia is a small annual herb that exhibits a beautiful pink flower and is Rhode Island's sole federally endangered plant. **It was historically found within coastal plain grassland habitats throughout the Northeastern United States, but is now known to exist at only 25 sites globally, due primarily to habitat loss from human disturbance and development. Once thought extinct within the State, Rhode Island currently contains at least two sites where this plant is considered relatively secure.** The DFW assists USFWS by monitoring the occurrence and abundance of this plant within Rhode Island and provides annual reporting. Known sites are visited during late summer when the plant is flowering to collect census information and passive surveillance is conducted to help identify additional extant sites. Technical assistance is provided to landowners at extant sites to help design land management practices that minimize disturbance or improve growing conditions. In the past, seed collection and site introductions have occurred to ensure this plant will persist on the landscape in the face of land use conversion and uncertain environmental conditions.



Sandplain gerardia



REPTILES & AMPHIBIANS

Coordination & Administration

The Herpetology Program intends to focus on the enhancement of communication with partners related to the conservation and management of amphibians and reptiles in the state and region. An excellent example of this job in action was the organization and execution of a Rhode Island specific half-day meeting to address the conservation and management needs of diamond-backed terrapins, the only “critically imperiled” reptile in the state. **This meeting was attended by 30 people from federal, state, academic, and non-profit organizations and led to the creation of a number of management-oriented working groups. We have also taken an active role in collaborating with and helping to administer numerous regional federal grants (CSWG and RCN) and regional working groups.**

Inventory & Monitoring

The inventory and monitoring of amphibians and reptiles is a challenging area that manifests in an array of sampling strategies and techniques. **With data lacking for the majority of the almost 40 species in the state, it is imperative that we develop and implement long-term, statistically robust monitoring programs for our SGCN.** Going forward, these programs will include amphibian call-count surveys, vernal pool inventory, and targeted surveys of our most critically imperiled species, among others. These data will help natural resource managers prioritize sites for conservation and implement development projects in the most responsible way possible. Citizen science will be an imperative part of many of these data collection efforts.



C. Raithel

Marbled salamander

Conservation & Management

There are many conservation issues that occur in Rhode Island that can be mitigated via management action. Road mortality is a great example. Both common and rare species are subject to mortality as a result of vehicle collisions. Identifying areas where this impact is particularly troublesome is a first step that will occur through a combination of predictive modeling and on-the-ground surveys. These high impact areas will be subject to mitigation which may involve the design and construction of roadway underpasses and/or the installation of wildlife barriers that prevent animals from moving onto roadways and funnel them towards existing passage structures. **Other potential management actions include the creation of breeding wetlands for amphibians, and the modification of mowing and burn practices to minimize impacts.**

Rhode Island, despite its small size, is host to a diverse assemblage of turtle species. There are many management issues that affect turtles including habitat loss, road mortality, and disease. In addition, illegal collection is an increasing concern in the Northeast as a result of high demand for these animals in both domestic and international markets. There are four turtle SGCN in Rhode Island: diamond-backed terrapins, wood turtles, box turtles, and spotted turtles. The effective management of turtle populations will require focused and persistent efforts. We intend to leverage relationships with both Rhode Island and regional partners to build capacity to carry out management efforts.



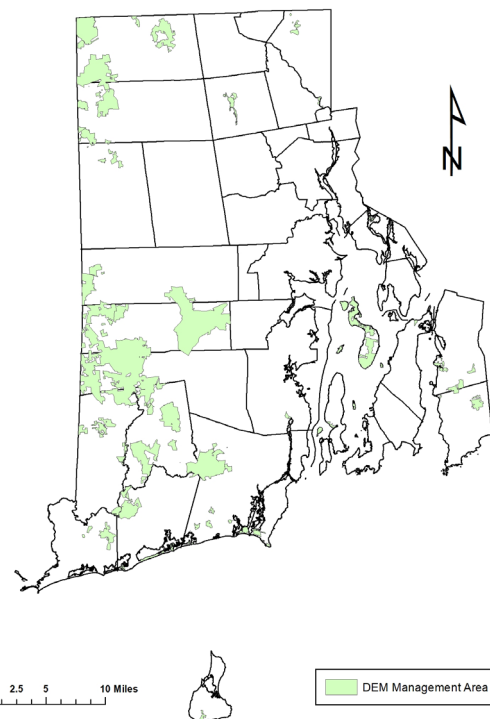
Northern diamondback terrapin hatchling



HABITAT PROGRAM OVERVIEW

Rhode Island is the smallest and second most densely populated state with a land area of 1,214 square miles, a population of just over one million people, and approximately 420 miles of coastline. Rhode Island contains a variety of natural habitats that are populated by a diverse array of wildlife species. Natural habitats range from coastal environs, which include the Atlantic Ocean, Narragansett Bay and associated estuaries, various coastal features such as dunes and bluffs, 3,500 acres of coastal wetlands, to terrestrial habitats which consist of forested uplands, shrublands, grasslands, freshwater wetlands, and riverine habitats.

The DFW is the primary agency tasked with protecting, restoring, and managing natural habitats and wildlife populations within the state. We provide an extensive system of diverse wildlife habitats, public hunting and fishing opportunities, and areas for other compatible forms of recreation. **Accordingly, we maintain primary or partial management responsibility on over 61,000 acres of land distributed across 15 towns and all counties. The DFW has primary management authority at 30 Wildlife Management Areas (WMAs) to maintain wildlife habitat and provide hunting opportunity.** WMAs include all lands which were acquired at least in part with Federal PR funds for the purpose of effectuating a coordinated and balanced program that maximizes the restoration of fish and wildlife resources and recreational hunting and fishing opportunities for the public. Other State-owned property under the care, control, or custody of the RIDEM managed in part by the DFW include certain State Parks and State Management Areas. We may participate in the development, operation, maintenance, and management of fish and wildlife resources, habitats, or public access/facilities for anglers and hunters on these properties.



Significant efforts have been made to develop, improve, and maintain DFW facilities, wildlife habitats, and access to WMAs and additional State-owned areas. The range of projects undertaken is extensive, including, development of new public access facilities, improvement and maintenance of existing access facilities and grounds, and wildlife habitat restoration projects. Such projects benefit wildlife populations and provide for enhanced public hunting and fishing opportunities, and improve site accessibility. We continuously evaluate project results in an adaptive manner in order to modify future work, ensure efficient and effective operations, and provide an acceptable public experience.



Climate Focused Conservation & Management

Our habitat program has been involved in several projects recently that seek to address the immediate impacts of climate change to coastal sites caused by as sea-level rise and more frequent and intense flooding and storm events. These projects are detailed below. More broadly, the anticipated effects of climate change on the northeastern United States are always considered when conducting site-level habitat management actions even though climate change is not having an obvious immediate impact. For example, at forested upland sites where wildlife clear-cuts have occurred, slash and downed woody debris are left behind to protect soil moisture since climate change is expected to lead to increased soil drying as drought events become more frequent and intense. At non-forested uplands sites, invasive plants are controlled where possible to protect a diverse assemblage of native forbs and shrubs in the face of uncertainty as to how individual species might cope with future climatic conditions. At wildlife marshes, new water control structures are being installed so that biologists can better control water depths that dictate habitat conditions, which may prove important to certain wildlife in the anticipation of more frequent and intense precipitation events.

Invasive Species Management

At State Management Areas, chemical and mechanical methods (mowing and selective removal) are employed to reduce the occurrence and minimize the spread of invasive plants and to release native vegetation and maintain non-forested upland habitat as largely herbaceous. The primary conservation threat addressed is the encroachment of autumn olive, bittersweet, barberry, Japanese knotweed, black swallow-wort, and Phragmites into open upland sites at WMAs. An adaptive approach directs invasive plant management wherein mechanical treatment occurs during winter and early spring; foliar herbiciding occurs during summer; and basal bark and cut-stump herbiciding occurs throughout the year— all accompanied by seasonal evaluations to inform future effort.

Land Management

We are responsible for posting property boundaries, identifying safety zones, assessing and maintaining kiosk signage and infrastructure, posting annual hunting season signage, and establishing public access opportunities on new and existing WMAs. The DFW is also responsible for acquiring, compiling, and managing land records for properties acquired with Federal Aid; assessing property and evaluating habitat as needed for land acquisition; reviewing and drafting land management plans; coordinating habitat work with partners to leverage combined efforts; and coordinating among state agencies via the State Land Management Council. Several staff members are appointed to participate in the regular proceedings of the DEM Land Acquisition Team and the DEM Public Access Team.



WETLAND HABITAT

Coastal Restoration

Opportunities to enhance coastal wildlife habitats' resiliency to climate change and sea level rise at state-owned coastal sites are continuously identified and explored. Sea level rise has created conditions wherein tidal water and fresh water inputs persist on the marsh surface indefinitely; this results in die-off of vegetation leading to erosion and reduced marsh function.

Sapowet Marsh Wildlife Management Area

A two-phase project has occurred at Sapowet Marsh to improve coastal resilience and sustain salt marsh habitat. Existing infrastructure (a parking lot and driveway) were relocated inland to restore the beach and dune area to a more natural state that will be allowed to succeed in a dynamic way that may include dune shifting and marsh migration. Twenty acres of upland coastal buffer were restored to coastal grassland/shrubland habitat by planting native grasses and forbs that provide critical habitat for wildlife while preparing these spaces for marsh migration in the face of sea level rise. **Additionally, within the salt marsh unit, areas of high marsh regularly inundated by tidal water and freshwater inputs were modified to improve drainage by installing shallow channels ("runnels") on the marsh surface across approximately 8 acres. Runneling techniques aim to sustain high marsh nesting habitat for species such as willet and saltmarsh sparrow, and sustain the ecosystem functions salt marsh habitats provide, such as habitat for migratory waterfowl.** A similar (but smaller) project is planned for 2019 at Longmeadow Coastal Access Site that will feature an end-of-road retro fit (removal of pavement) and the relocation of parking infrastructure to repair beach habitats that will promote a more resilient and dynamic shoreline.

Succotash Marsh Wildlife Management Area

In cooperation with the Division of Agriculture's Mosquito Abatement program and Save the Bay, we participated in a salt marsh adaptation project at the Potter's Pond salt marsh unit of Succotash Marsh WMA. Shallow runnels were excavated across five acres of salt marsh habitat to improve surface drainage with the aim to sustain high marsh habitat as described above.

Ninigret Conservation Area

A project led by the Coastal Resources Management Council (CRMC) on DEM land supervised by the DFW was executed in 2016 through 2018. A major salt marsh adaptation project aimed to elevate the surface of the marsh through thin layer deposition across 40 acres of low and high salt marsh habitat. Dredge material from the adjacent Charlestown Breachway was excavated and spread thinly across the surface of the drowning salt marsh habitat. An extensive network of runnels and thousands of plants were also installed at the site. By increasing the elevation of the salt marsh surface, the high marsh can persist longer than if allowed to be permanently inundated by tidal waters. Herbicide treatments were also used to control Phragmites, which displaces native salt marsh grass critical to certain wildlife. A very similar project both in technique and scope, led by CRMC on DEM land, is planned for Quonochontaug Pond, commencing in 2019.



Digging runnels at Ninigret



WETLAND HABITAT

Freshwater Wetlands

We supervise 12 wildlife marshes and impoundments, periodically inspecting each impoundment's water depth, water control structure, dike, and emergency spillway and recording and mapping the occurrence of invasive species and general state of native vegetation when necessary. Water depth is manipulated seasonally (where possible) to enhance value to wildlife and/or hunting opportunity. Chemical control of phragmites is conducted to help maintain a diverse array of native vegetation. Beaver damming of impoundment water control structures is a recurring issue, and material is cleared with hand tools when possible during inspection visits or cleared with heavy equipment as needed.

New water control structures are installed at wildlife impoundments periodically. Recently, water control structures were replaced at Great Swamp and Woody Hill impoundments in cooperation with Ducks Unlimited. These new structures are designed to minimize beaver impacts and allow for better control of water depth. Annual random vegetation sampling occurs at Great Swamp Impoundment, as part of a long-term monitoring effort to track changes in habitat quality through drawdown and flooding regimes. Utilizing these control structures to manipulate water depth can improve nesting and foraging conditions for waterfowl and wading birds during the breeding season and improve foraging and roosting conditions during the non-breeding seasons for waterfowl, wading birds, and shorebirds.

UPLAND HABITAT

Forested Uplands

In a predominantly forested biome, forest management is a critical part of wildlife habitat management. We are dedicated to responsible stewardship of healthy forests and ecologically important stands, while engaging in site-level management to create suitable forest conditions for wildlife of conservation need. **Currently, we are focused on planning and executing silvicultural treatments to promote underrepresented forest habitats and to diversify age-class structure across the landscape.** Most recent treatments are intended to create young forest through even-aged regeneration treatments, to benefit species such as New England cottontail, American woodcock, and ruffed grouse. Additional recent projects have focused on restoring pitch pine-scrub oak forest communities through tree cutting and prescribed fire treatments. These communities provide a unique form of early successional habitat and other conditions many wildlife species rely upon. Silvicultural work is most often accomplished by contracting local woodcutters through an open bidding process, whereby the wood is brought into the local market, or by entering agreements with contractors hired to execute specific tree cutting prescriptions.



Young forest habitat



UPLAND HABITAT

Non-Forested Uplands

To maintain a diversity of habitats on state management areas in a predominantly forested landscape, we aim to maintain and enhance early successional habitat at non-forested upland sites, including grasslands, shrublands, and old fields to benefit species that rely on these habitats. The aim is to remove undesirable woody vegetation and invasive plants to maintain open upland sites as largely herbaceous. Mechanical treatment by brush mowing is the primary method employed, though single-tree and single-shrub selection by chain saw and hand tools is another technique that is used. Agency equipment used to carry out habitat work includes three skid steer track machines with various attachments, four four-wheel drive tractors that utilize attachments such as side-mounted mowers and conventional tractor-mounted brush mowers. Brush mowing and cutting occurs during the winter months when disturbance to wildlife and soil resources is minimal; **we mow an average of approximately 200 acres annually.**



Common milkweed

Farming prescriptions at non-forested upland sites include: annual crops (buckwheat, sunflower, sorghum, winter rye) and perennial native grasses and forbs. Annual crops are established as traditional wildlife food plots to provide breeding-season cover and forage for wildlife, and to provide supplemental winter forage for game species; perennial grasses and forbs are established to provide long-term vegetative cover that requires less annual maintenance and provide quality native habitat for birds and small mammals, but also herpetofauna and beneficial insects, including pollinators. These plots also enhance hunting opportunities, particularly for pheasant and mourning dove. Secondary treatment efforts including electric fencing, and herbicide; mowing and disking are applied to sunflower and buckwheat plots toward the end of the growing seasons to further enhance hunting opportunities. **In Spring 2018, 80 acres of planting effort occurred.**

Prescribed Burns

Prescribed fire is a land management tool that we use to accomplish forest management, invasive plant control, and habitat enhancement. Rhode Island has a history of periodic, low-intensity wildfires that have more recently been suppressed by land use change and human activity; prescribed fires mimic these natural disturbance events and help maintain healthy natural communities. Official burn plans are completed to provide a roadmap for safe and permissible implementation of fire on DEM land, and DFW staff coordinates with Division of Forest Environment staff and fire professionals to accomplish burns. At grassland sites, fire reduces undesirable woody vegetation and promotes native grasses and forbs that benefit wildlife and pollinators. At forested sites, fire consumes organic material built up on the forest floor and stimulates new growth of trees and shrubs to create dense understory conditions important for wildlife.



Facilities and Grounds

Technical assistance responsibilities cover a broad spectrum of activities, enabling the success of all programs within the DFW. Responsibilities of the development crew and the facilities and grounds management include regular and seasonal maintenance at WMAs and boat ramps (e.g., mowing, trash, signage, spillways, dam maintenance, etc.); site evaluations of one WMA and one fishing area/ramp every 2 weeks; inventory and identification of deficiencies for signage, parking areas, ramps, kiosks, guard rails, trash, mowing, etc.; developing a comprehensive listing of all WMA's, boat ramps, fishing access sites, and DFW managed facilities, buildings, drainage, and culverts; implementing the pheasant stocking program; and the maintenance and operation of check stations (both small game and deer).



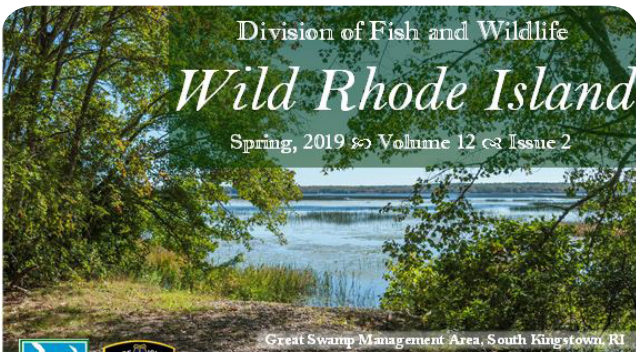


Technical Assistance

We are responsible for responding to the public’s questions and comments regarding Rhode Island’s wildlife, fisheries, habitat, DFW programs, regulations, and matters regarding natural resource management within the state. These include nuisance wildlife concerns, biological information inquiries, regulation clarifications, and much more. Many of these calls and emails involve questions on how to mitigate nuisance wildlife issues, stocking programs, and hunting. **Since November 2017, we have received approximately 4,200 calls.**

Wildlife Information Sheets

In response to the public’s growing interest in wildlife species, we also produce wildlife information sheets to be posted on the website for public access. Topics include species fact sheets, how to manage issues with wildlife, conservation concerns and disease information. **There are currently 34 wildlife information sheets available to the public via the RIDEM website, with plans to revise, improve, and expand this collection.**



INSIDE THE ISSUE:

- GREAT SWAMP MANAGEMENT AREA 3
- IMPROVEMENTS TO STATE RANGE 4
- THE FUTURE OF OUR BEES 5
- SHREWS OF RI 10
- NEWS FROM DFW 12



Salmon in the Classroom Celebrates 15 Years

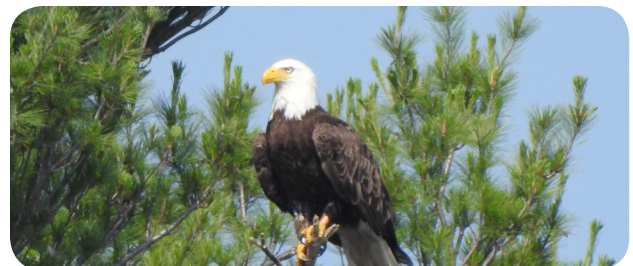
By Kimberly Sullivan, Aquatic Resource Education Coordinator, DFW

Twenty students stand by the edge of a cold stream with clear plastic cups each containing an Atlantic salmon fry. The fish is about 1 to 1 ½ inches with vertical lines (par marks) that will help it camouflage once it enters the stream. In the stream, five more students stand in chest waders; their job is to scare the larger fish away from the young and vulnerable fry. Rumors from the previous year mentioned that a few of the fry were lost to the larger fish; therefore, they take every precaution to maximize the survival of the one-inch fish. On the count of three, the fish are released into the stream and they immediately swim for the cover of rocks, where they will begin their journey to become adult salmon.

Fifteen years ago, schools across Rhode Island were invited to join a new RIDEM Division of Fish and Wildlife Aquatic Resource Education initiative: “Salmon in the Classroom.” On a cold, January morning nineteen teachers from fourteen schools across Rhode Island gathered together at the Great Swamp Field Headquarters to listen to Mr. James Carroll of the Connecticut River Salmon

“Wild Rhode Island” Magazine

Our quarterly publication provides information to the public, outside organizations/agencies, and other DEM Divisions regarding the projects and programs of the DFW. “Wild Rhode Island” (WRI) engages the public by allowing us to highlight and showcase DFW programs; address public concerns in an in-depth and comprehensive way; support the culture of hunting and fishing with tips, recipes, and safety information; advertise events; and educate readers on Rhode Island’s natural resources. **WRI has been in print since 2008 and, to date, is sent out by mail or email to 632 individuals, 82 libraries, and 36 organizations across New England.**



P. Topham

We often receive wildlife sighting reports and photos from the public, especially for less common species like bald eagles.



Hunter Education

One of our major priorities at the DFW is to support our state's experienced hunters and those just beginning their journey to becoming a successful and ethical hunter. Our Hunter Education Program (HEP) is primarily responsible for providing state mandated training and certification to individuals seeking their first hunting license. Two types of certification are provided: Hunter Education Certification for the firearms hunter, and Bowhunter Certification for the archery hunter. Students can complete classes online or in a classroom. Topics include firearms and archery safety, hunting and shooting skills, hunting safety and ethics, and wildlife conservation. Some classes also include time at the shooting range. Practical field training is offered by appointment for those seeking a more hands-on experience.

In addition to state mandated training, we also provide continuing education to the public by offering fun, safe, and interesting classes on a variety of topics such as firearms familiarization, trapping, deer hunting, tree stand safety, archery practice, wild game cooking, shooting skills, turkey hunting, waterfowl identification, land navigation, sporting clays, and wilderness first aid to name a few! We also publish a Facebook page dedicated to public outreach about our education programs.

SOCIAL MEDIA STATISTICS

Rhode Island Division of Fish and Wildlife Outdoor Education

5, 647 Facebook followers

Post frequency: 1-2 posts per day

Female followers: 39%

- Largest percentage of female followers are between the ages 35-44 (11%)

Male followers: 60%

- Largest percentage of male followers are between the ages 25-34 and 35-44 (18%)

Largest follower groups:

- Providence (422)
- Warwick (408)



Teaching our "Successful Deer Hunter" class



Great Swamp Shooting Range

The Great Swamp Shooting Range is a place where citizens can learn about and practice shooting in a safe environment. It is the only free public facility of its kind in the state. Shooting ranges play an important role in supporting hunter education, youth shooting sports programs, firearms safety education and provide a safe environment to introduce newcomers to shooting sports. Shooting sports enthusiasts have been a positive environmental force for decades. The taxes on firearms and ammunition purchased by hunters and shooters support the Wildlife Restoration program and this funding provides the vast majority of support for wildlife restoration projects in Rhode Island and across the country.

The Great Swamp Shooting Range is located in the Great Swamp Management Area in West Kingston, RI. The range was recently expanded and upgraded with many new safety features. The brand-new shooting shelter boasts 16 shooting stations, including 8 shooting lanes of 50 yards and 8 shooting lanes of 100 yards. Safety improvements include visual safety lighting during range operation, overhead baffles across all 16 shooting lanes for a “no blue sky” effect that controls the possibility of stray bullets, and bullet absorbent materials lining the overhang and baffles. Several years ago, solar panels were installed on the pavilion roof to provide power to the safety lighting. There is also a shotgun field for clay target shooting and an area for public archery practice and archery proficiency testing.

The range is open to the public through a free permit system administered through the HEP. Range users are required to provide documentation of firearms training as well as attend a safety briefing delivered by the Range Safety Officers prior to using the range. **There are currently 1,434 active range permit holders.**

The range is open April 1 to September 30 each year and is free to the public. Range safety staff are present during open hours for range safety certification and assistance. Numerous programs and events are held at the range including Women’s Day at the Range and youth pheasant and waterfowl hunter training. We anticipate that these events will expand in the future.



Great Swamp Shooting Range, 2018 improvements



Volunteers plant native shrubs for wildlife

Volunteer Program

In the past decade, there has been an increased interest by the public to become engaged in conservation and citizen science. The DFW has answered that call by creating our first official Volunteer Program. While this program provides the public with unique and rewarding opportunities, it also provides tremendous hands-on support to our projects, a number of which could not be accomplished without the help of dedicated volunteers. Additionally, working alongside the public helps to increase environmental awareness within the community and foster a greater appreciation for the important conservation and management work that the DFW performs. By participating in the Volunteer Program, volunteers also generate in-kind Federal matching funds, which are used to maintain and enhance state fishing and hunting areas, as well as to fund fish and wildlife research and conservation. In the four short years since the Volunteer program's inception, over a dozen programs have been opened to public participation as described below.

WILDLIFE	VOLUNTEER OPPORTUNITIES
Bats	Maternal bat roost surveys, bat banding assistance, building bat houses, and acoustic surveys
Bear	Bear hair snare surveys
Bird Atlas	Various atlas surveys throughout RI
Herptiles	Various reptile and amphibian surveys (COMING SOON)
New England Cottontail	Pellet collection surveys, genetics lab assistance
Waterfowl	American black duck and Canada goose banding, wood duck nest box building and maintenance
White-tailed Deer	Check station assistance
Wild Turkey	Spring turkey surveys
Wildlife Habitat	Stewardship of WMA's, invasive plant control, planting, pruning, painting, trash removal
FRESHWATER FISHERIES	VOLUNTEER OPPORTUNITIES
American Eel	Eel surveys
Fish Stocking	Float stocking
Fishing Access Stewardship	Maintain fishing access, invasive plant control, erosion control, trash removal
Herring	Spring herring surveys, herring lifts (when necessary), fish ladder maintenance
Stream Conservation	Temperature surveys, stream shocking



Volunteer Program (continued)

The Volunteer Program engages hundreds of volunteers every year through a variety of conservation and research projects. **In 2018, over 300 individual volunteers participated in DFW projects,** many of which participated in long-term or multiple projects throughout the year. **In 2018, DFW volunteers contributed approximately 4,900 hours, 33,110 miles, and produced \$117,365 in in-kind match funds.** Additional end-of-year volunteer contributions, are still being submitted.

GRANT	IN-KIND MATCH \$	HOURS	MILES
W23R	\$73,762.45	2,924.27	22,560.85
W22D	\$15,971.03	776.14	1,456.50
T7R1	\$2,958.37	147	320.7
F26R	\$9,468.83	355.79	5,012.10
F59D	\$9,930.95	416.26	3,759.00
F10D	\$5,273.68	278.50	0.00
PROGRAM TOTAL	\$117,365.31 *	4,897.96 *	33,109.15 *
* CURRENT 2018 NUMBERS AS OF 1/15/19 - VOLUNTEER RECORDS STILL BEING SUBMITTED			

Rhode Island Wildlife Action Plan (RI WAP) Outreach

The RI WAP is a comprehensive document identifying the state’s SGCN, the key habitats that support them, and the list of actions we are dedicating to completing in order to responsibly protect these resources from further decline. The DFW promotes awareness of the RI WAP and makes it accessible to target audiences. This involves technical assistance to DEM and other state, federal, and regional agencies; conservation organizations; and other partners with long-range planning. Other responsibilities include environmental and regulatory review; land use decision-making and management; conservation funding; and outreach so that SGCN concerns are incorporated and significant wildlife habitats are properly identified, managed, and protected. The focus of technical assistance and outreach is to ensure that concerns regarding SGCN are incorporated, and significant wildlife habitats are properly identified, managed, and protected.



Representing the DFW and the RI WAP



Girl Scouts excited to learn about wildlife

Wildlife Outreach Program

We manage wildlife resources for equitable use and access for all Rhode Islanders; therefore, connecting with the public is key to spreading awareness of local conservation and inspiring Rhode Islanders to join us in being wildlife stewards! The Wildlife Outreach Program provides opportunities for the public to connect with Rhode Island’s wildlife and to learn about our past, present, and upcoming wildlife management and research projects. We develop and present enjoyable, engaging, indoor and outdoor outreach programs across the state for audiences of all ages and demographics. **Since 2017, we have reached over 6,000 Rhode Islanders through 50 public programs (indoor/outdoor) for all ages, and 117 school programs.**

We develop, write, and distribute a variety of printed and electronic outreach materials, such as our monthly email update containing information about upcoming Hunter Education, Aquatic Resources Education, Wildlife Outreach, and Volunteer Programs. The most recent development of written outreach materials is the production of our quarterly newsletter for children, “Wild Rhode Island Explorer,” written for students in grades 4 through 7. **Over 2,000 copies are printed quarterly. Copies are sent to all libraries across the state (81), 210 email subscribers, and 75 mail subscribers and counting.** Many subscribers are teachers who utilize this publication in their science and literacy curricula. Future goals include developing and implementing a wildlife and fisheries management course for educators, in conjunction with the Hunter and Aquatic Resource Education Programs.

The Wildlife Outreach Program also contributes material to the DFW and RI DEM Facebook pages for the popular “Wildlife Wednesday” posts and manages the DFW Instagram account. The DFW also significantly contributes to regular Department press releases, in response to increased public interest in wildlife conservation and management. **From 2016-2018, approximately 20% of each year’s press releases were DFW-related (an average of 25 press releases each year).**



Wild Rhode Island “Explorers”



Winter 2019 edition



Bird watching at Great Swamp WMA



HUNTING & TRAPPING

Falconry

The DFW Falconry Program requires the DFW to promulgate regulations, issue exams required for permitting, communicate with the public, USFWS, and other agencies about falconry, conducting facility inspections and approval, and issue licenses and permits

Rhode Island Waterfowl Stamps

All hunters planning on hunting waterfowl must first purchase a Rhode Island Waterfowl Stamp. These stamps are available for purchase by mail or in person at Great Swamp. Purchases require staff to prepare stamps, process payments, and mail out orders. All orders are recorded in a database. **1,543 waterfowl stamps were sold online during the 2018 -2019 season.**



*2018-19 Rhode Island Waterfowl Stamp by
Kaia Bennett*

South Shore Management Area (SSMA) Goose Hunting

To hunt waterfowl at the SSMA in South Kingstown, hunters must obtain a SSMA permit and make a reservation for their desired hunting field. Up until the 2018-2019 hunting season, hunters had to pick up the permits in person at Great Swamp or mail a self-addressed and stamped envelope to the office for the permit to be mailed to them. With the advent of our new online licensing system, it is now much more convenient for hunters to obtain a SSMA permit. After obtaining their permit, hunters must reserve a field no more than seven business days in advance. Reservations can only be made Monday-Friday between 9AM and 12PM. The front desk staff is responsible for booking all the SSMA reservations and reporting each week's reservations to the DEM Law Enforcement. **There are an average of 264 SSMA permitted hunters per year (data from 2009-2018).**

Trapping Permits

We are responsible for establishing harvest dates and bag limits for all furbearer species. At the present time, we collect furbearer harvest data through mandatory harvest reporting, pelt tagging of selected species (beaver and fisher), collection of trapper harvested specimens (fisher), and attending fur auctions. In past years we have collected and prepared various tissue samples from specimens (mink, fisher, road-killed river otter) voluntarily submitted by trappers for cooperative studies with the US EPA, including mercury, stable isotopes of carbon and nitrogen, and other environmental contaminants and pollutants. There was an effort to include surveys for non-consumptive terrestrial species such as shrews, voles, mice, and moles to develop a better understanding of their status and distribution in the state. Other duties and responsibilities have precluded any concerted survey efforts in recent years. We still make every effort to collect and document rare and interesting specimen records (porcupine, bobcat, weasels, island records, etc.) whenever possible through collection of road-kills and specimens obtained from wildlife rehabilitators, nuisance wildlife control specialists, and the general public. Our furbearer biologist also serves as the DEM representative to the Northeast Furbearer Resources Technical Committee, the State Rabies Board, the Rhode Island Trappers Association, and the Northeast Black Bear Technical Committee.



Sunflower wildlife food plot

Handgun Safety

The Handgun Safety Certification “Blue Card” Program provides the public with information and certification of safe handgun handling, ownership, and regulation. The program requires working with qualifying handgun vendors and firearms sporting clubs to proctor the certification exam, providing the public with written study materials regarding handgun safety, and issuing the certification cards. **There are 60 handgun vendors in Rhode Island, and an average of 4,997 blue cards are issued annually from the Great Swamp Field Headquarters (data from 2010 – 2017).**

LAND MANAGEMENT

Agricultural Leases

We administer an agricultural lease program wherein agricultural partnership on state land assist the DFW by enhancing hunting opportunities and accomplishing habitat management without investing DFW time, equipment, and materials. **As of March 2018, there were 14 lease agreements across 347 acres of RIDEM property.** Lease agreements are entered through an open bidding process based on terms established by DFW biologists with the intention of raising and harvesting agricultural products while providing wildlife habitat. The participating farmers grow row crops, corn, or hay and alfalfa, in addition to planting and not harvesting crops intended solely for wildlife such as sunflower and buckwheat. The lease program is administered, tracked, and monitored by DFW biologists. The biologists attend and represent the DFW at the State Lands Management Council, Trails Advisory, Land Acquisition, and other meetings as needed or upon request.

Aquaculture

The DFW also reviews aquaculture applications for impacts to critical waterfowl and wildlife habitats, potential for disturbance to waterfowl or other wildlife, and impacts to traditional hunting activities that occur within or adjacent to the proposed aquaculture site. Wildlife staff provide written comments on these applications.



Aquaculture leases in Narragansett Bay



Raccoon, Dean Birch

WILDLIFE

Ferret Possession

To possess a ferret in Rhode Island, one must first apply for a ferret permit. Ferret permit applications require a veterinary certificate of a current rabies vaccination, a veterinary certificate of neuter or spay, a certificate of Animal Health, and a payment of \$10.00. When we receive all necessary components, the permit is issued to the permittee, a copy is retained by DFW, and a copy is sent to DEM Law Enforcement. The permittee is then entered into a database. We issue approximately 12 ferret permits per year.

Importation and Possession of Native Wildlife

Importation and Possession of Native Wildlife permits require an overview of the animal's housing, feeding, and care requirements, acquisition information, the length of time the animal will be housed, a letter from a veterinarian stating the animal's health and agreement to provide medical care, exercising and feeding regimens, and the applicant's previous wildlife care experience. Once approved, the permittee will receive a mailed permit and they will be entered into a database. The Division receives an average of 5 permit applications per year (2016-2018).

Nuisance Wildlife Control Specialists

Nuisance Wildlife Control Specialists (NWCS) are private companies and individuals who trap and/or euthanize nuisance wildlife for the public. To become a NWCS, one must hold a trapping license and pass an exam proctored by the DFW. We also produce the NWCS Handbook, which has information about wildlife species, ethical euthanasia, trapping methods, and more, and serves as the study guide for the exam. **In 2018, 42 companies and individuals were licensed for nuisance wildlife trapping.**

Scientific Collector's Permit and Special Use Permit

Scientific Collector's Permits allow qualified individuals to collect or study Rhode Island's fish and wildlife for research purposes. This program requires DFW staff to review applications, create permits, and have them signed by the appropriate staff. The application requires a research proposal outlining which species need to be collected, the research organization and credentials, and a report at the end of each year. Applications must be renewed, and permits issued, each year. **On average, we receive 42 applications per year (data from 2010-2018).** DFW staff also review and act on Special Use Permits from the public that request access to Wildlife Management Areas for research or group recreation activities.

Wildlife Rehabilitation

The DFW Wildlife Rehabilitation Program encompasses regulatory oversight of wildlife rehabilitation within Rhode Island. This includes communicating with the public about wildlife rehabilitation, promulgating regulations concerning these practices, outlining standards for wildlife rehabilitation, proctoring exams required for permitting, providing an annual International Wildlife Rehabilitators Council Wildlife Rehabilitation Basic Training Course, conducting facility inspections and approval, and issuing annual permits. **There are currently 40 wildlife rehabilitators and 31 subpermittee wildlife rehabilitators in Rhode Island.**



Rehabilitation in action

Wildlife Rehabilitation Association of RI