

Rhode Island Department of Environmental Management

Division of Fish and Wildlife

Annual Report 2022



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Dean Birch

Protect | Restore | Manage

The RIDEM Division of Fish and Wildlife (DFW) serves as a resource for hunters, anglers, hikers, mountain bikers, wildlife watchers, municipalities, legislators and the public as a whole.

The DFW protects, restores and manages the wildlife resources of the state. Sharing management responsibility of more than 60,000 acres of land with the Division of Forest Environment, we are responsible for thousands of wildlife species. In addition to our other duties (e.g., research and management), we are responsible for the State's public hunter education programs and overseeing all hunting and trapping, which is an integral component to our revenue stream.

The DFW is primarily funded through the Federal Wildlife and Sport Fish Restoration Program, which is administered through the U.S. Fish & Wildlife Service. This program uses taxes placed on firearms, ammunition, and archery equipment to help fund fish and wildlife research and conservation programs, habitat acquisition, and outreach and education programs.

Photo: Dean Birch



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.

DFW Chief's Letter

Welcome to the RIDEM DFW's annual report for 2022! Over the past year, we have accomplished an enormous amount of work, with only a small sampling highlighted in this report. Numerous fish and wildlife research projects were completed throughout 2022, with the addition of some exciting new efforts, including the initiation of our first state Bumblebee Survey, aimed at inventorying these valuable pollinators throughout the state. A major development in fisheries research was also conducted by staff and partners this year on the Saugatucket River. Migratory river herring were tagged and tracked utilizing stationary receivers throughout the river system to determine fish passage efficiency and guide future conservation decisions for this important species.

One of the more significant wildlife habitat management accomplishments of the year was a prescribed burn on Dutch Island, Jamestown. This was a highly anticipated and long-awaited project aimed at improving coastal shrubland habitat. In addition, we continued to expand inland early successional habitat through various tree harvest operations and mowing. On the fisheries habitat front, staff continued to work with partners on fish passage and river connectivity projects for migratory and resident fish throughout the state. Fish passage work on coastal rivers and streams is ongoing, but restoration work also focused on obstructions in inland waters for brook trout habitat improvement. The "Trees for Trout" program, which involves utilizing recycled holiday trees for brook trout habitat restoration, was successful in 2022 and will return in 2023.

This year, our outreach and education staff hit the ground running after a long and challenging pandemic, presenting diverse and enjoyable opportunities for Rhode Islanders to connect with our state's natural resources. Many popular programs were brought back, and new opportunities were developed! Additional programs included the launch of a partnership with the National Archery in the Schools Program (NASP) and area schools. We were thrilled to once again partner with the Matt Light Foundation for our spring youth turkey hunt and Ducks Unlimited for our fall youth waterfowl hunt. One of the most exciting additions to our Hunter Education Program was a collaborative hunting course at the University of Rhode Island. The class provided an active learning approach on the role of hunting in wildlife conservation. Students were incredibly fortunate to participate in a mentored hunt and game dinner to get a full sense of the enjoyment and value of hunting in our beautiful state. The Aquatic Resource Education Program expanded partnerships by hosting a surf casting class for RI veterans partnering with the Vet Center and Narragansett Surf Casters. After a long pandemic hiatus, our Wildlife Outreach Program brought back our popular outdoor educational programs like Come Birding with Me, Sky Dance Night, and Summer Bat Night, and also launched brand new "Rhody Critter Kits" for K-5 teachers. In addition, our Volunteer Program offers many opportunities for students and the general public on projects. Public engagement with our natural resources and conservation practices is critical for the future of Rhode Island's fish and wildlife species!

In 2022, RIDEM began using a new online licensing system Rhode Island Outdoors (RIO). The system began with hunting and fishing, and now includes marine fishing, and will soon wrap in boat and ATV/snowmobile registering. It's a one-stop shop for all outdoor activity needs. The new system also includes easier access to lottery applications and easy-to-use game harvest checking.

As always, this year the DFW worked on acquiring new land for hunting, fishing and conservation activities, but also worked hard to maintain, protect, and conserve existing State land. The DFW owes a debt of gratitude to our resource management section, consisting of heavy equipment operators and maintenance technicians who work throughout the state. Though a very small staff, they are responsible for accomplishing a mammoth amount of work throughout the state including, operation and maintenance of boat ramps, fishing access sites, management of roadways and habitat within Wildlife Management Areas, parking lots, dams and fishways. They diligently perform all these activities so the public can safely enjoy and utilize these outdoor resources.

I hope you find the 2022 annual report informative, and I encourage everyone to participate in Rhode Island's outdoor activities whether it's fishing, hunting, hiking or boating!



Sincerely,
Phil Edwards
Chief, RIDEM Division of Fish and Wildlife

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Collaborative Wood Turtle Research

Named for the furrowed grooves on their shells that seem to be carved from wood, the wood turtle (*Glyptemys insculpta*) is one of Rhode Island's most stunning reptiles. This medium-sized turtle spends the cold part of the year in our most pristine freshwater streams and rivers, often burrowed deep under the banks during the most frigid months. As temperatures rise in the spring, wood turtles emerge from the streams and into adjacent upland habitats to nest, eat, and grow. Because of these specialized habitat requirements, low hatchling survival and low reproductive output, and threats like habitat loss, road mortality, and illegal collection, the wood turtle is recognized as a Species of Greatest Conservation Need in RI. Due in large part to their elusive nature and cryptic appearance, wood turtles remain one of the most poorly understood reptiles in RI. Fortunately, recent collaborations with three different universities are poised to change that.

Funded in part by a Competitive State Wildlife Grant focused on wood turtle conservation, University of Rhode Island graduate student Chloe Johnson spent 2021 and 2022 conducting a total of 120 surveys at 24 different locations throughout the state. The study confirmed wood turtle presence at eight of these sites, several of which had no prior documentation of the species. A partnership with Saint Lawrence University was also motivated by a desire to improve our understanding of the species distribution in the state. This project saw the unleashing of a secret weapon in the form of Newt, a dog specially trained to detect wood turtles. Led by student-handler Julia Sirois, Newt not only found wood turtles at an impressive rate during his summer 2022 surveys, but also garnered national press attention for his skill (and cute goggles). Finally, RIDFW has partnered with Antioch University to carry out a study of the movements and habitat use of one of the state's largest populations of wood turtles. Successfully launched this spring by RIDFW personnel, the study will be led in 2023 by Antioch graduate student Chris Polinski. By the time the study concludes in fall 2023, as many as 20 individual turtles will have been tracked using GPS telemetry. The GPS tags have the ability to record hundreds of locations per month for each turtle – data that will improve the ability to manage wood turtle populations. Other important partners in these projects include the Roger Williams Park Zoo and the Rhode Island Natural History Survey.

Collectively, these projects represent a substantial investment in improving our understanding of wood turtles in RI and how to best protect their populations. This new information will provide an understanding of how rare wood turtles are relative to other turtles and will be used to reassess their conservation status in the coming years. Work carried out in 2022 is representative of a significant advancement in our ability to ensure the viability of this important species well into the future.



National Archery in the Schools Program Launches in RI

The DFW has officially partnered with the National Archery in the Schools Program (NASP) to bring target style archery to elementary, middle, and high schools throughout the state of Rhode Island.

With schoolchildren back in the classroom at the start of 2022, the DFW was finally ready to approach NASP leadership about bringing the program to RI—now its 48th participating state. As the coordinating agency for RI, DFW would be responsible for Basic Archery Instructor (BAI) trainings and facilitating ongoing equipment procurement, repairs, reporting, and even tournaments!

To put RI on solid footing for the program debut, NASP and its sponsors graciously offered a significant amount of archery equipment for a pilot launch at no cost to schools or the DFW. Nine schools settled into the pilot roster and training was scheduled for October of 2022.

Three RI DFW staff—and one longtime agency volunteer—were trained by regional NASP coordinators at Narragansett Bow Hunters in North Kingstown. They were taught about the program legacy, benefits, safety record, and standard operating procedures. Once certified to the BAI level, they underwent further teaching exercises to attain BAI Trainer status. Now thoroughly prepared, DFW staff led a full-day BAI session for 12 teachers at Cranston West High School.

Multiple new schools have already expressed interest after hearing of the program through press releases and local news. For schools unable to self-fund, the current goal is to acquire more kits through agency means to establish more lending relationships. Our Hunter Education staff are looking forward to supporting access to this unique sport to teachers and students across RI!



Dutch Island Habitat Restoration

In March 2022, the DFW partnered with RIDEM's Division of Forest Environment, the town of Jamestown, the town of South Kingstown, US Fish and Wildlife Service, and the Dutch Island Lighthouse Society to implement a prescribed burn on Dutch Island. The habitat on the island had become overgrown with invasive plant species, in need of rejuvenation and restoration. The New England landscape is no stranger to fire. Historically, natural fires and prescribed burns implemented by indigenous peoples created habitat for game and encouraged the growth of preferable plant species. In today's developed landscape, fire is typically suppressed to avoid damage to homes and to keep people safe, but occasionally, fire is encouraged on the landscape in a controlled manner.

Prior to burning, habitat was cleared and trees and shrubs were left as mulch on the ground, a process called mastication. By restricting woody material to the ground, the risk of the fire getting out of control is minimized, keeping the flames low. When weather conditions aligned in late March, prescribed fire was applied by a team of biologists, foresters, and prescribed fire specialists. It is important to note that burns are only done outside of the active season for most wildlife to reduce disturbance. Prescribed fires are slow, allowing active wildlife to leave the area and avoid danger. A buffer was established around historical structures on the island to prevent any damage to them.

The goal of this collaborative project is to restore coastal shrubland habitat for a variety of species. Coastal shrubland is important for songbirds both during the breeding season and migration periods, as well as for pollinators and small mammals.



Saltmarsh Sparrow Monitoring

Amongst the vibrant green grasses and sticky muck of Rhode Island's saltmarshes, live two of our state's most inconspicuous and threatened species, the saltmarsh sparrow (*Ammodramus caudacutus*) and the seaside sparrow (*Ammodramus maritimus*). To the untrained eye, they look like any other little brown and gray bird. However, they are habitat specialists in the direct line of fire of sea level rise. Saltmarsh and seaside sparrows nest just above the ground, tucked in the grasses. As a result, their nests are prone to flooding as the tide ebbs and flows in the marsh. With the impending threat of rising sea levels and higher tides as a result of climate change, biologists across their range are concerned for the survival of these species into the future.

This year, the DFW began new collaborative projects to manage and conserve RI's populations of saltmarsh and seaside sparrows. These projects include habitat management of saltmarshes to mitigate the effects of sea level rise in the hopes of giving these species the space they need to breed and thrive. Habitat is continually being surveyed throughout the state to assess conservation needs. Biologists and volunteers are also monitoring the breeding success, habitat use, and nesting locations of both species. Individual saltmarsh sparrows were also banded in 2022 during the breeding and post-breeding seasons to monitor local populations.

Efforts to conserve both the saltmarsh and the seaside sparrow will continue into the future. RI's saltmarshes are unique and important habitats, critical not only to our state's overall biodiversity and ecological health, but to our economic stability as well. The Ocean State relies on healthy and diverse saltmarshes to provide buffers against storm surges, filter pollutants, and serve as nurseries for our beloved fish and shellfish resources. The DFW looks forward to continuing saltmarsh conservation efforts into the future for the well-being of our wildlife and Rhode Islanders!



Spotlight on DFW's Aquatic Resource Education Program

RI's Aquatic Resource Education (ARE) Program is Federally-funded through the 1984 Wallop Breaux Amendment of the Dingell-Johnson Act, which allows states to allocate a portion of their Sport Fish Restoration fund money to outreach and education as a means to enhance the public's understanding of their aquatic resources for the conservation and sustainability of game fish species. Here in the Ocean State, our ARE Program consists of diverse opportunities for Rhode Islanders of all ages to engage with both freshwater and marine resources. The ARE Program Coordinator also serves as the State Coordinator for both Project WET and Project WILD, nationally acclaimed environmental education curricula; teacher training is offered directly and through its dedicated facilitator network. Other offerings include unique marine and freshwater ecology programming, basic and advanced fishing training for all ages, and the Salmon/Trout in the Classroom programs. Over the past five years the ARE program hosted over 850 programs and reached over 59,000 participants focusing on all aspects of water, its usages and the importance of water stewards throughout the state.

Partnerships are key to the success of the ARE Program! An outstanding example of partnerships in action is the annual Vamos a Pescar event series, which focused on providing fishing opportunities to Providence's Spanish-speaking families. Under a grant coordinated by the Partnership for Providence Parks/Urban Wildlife Refuge, partners across the state offered 8 fishing programs, introducing over 300 participants to the sport of fishing. Additionally, a partnership between Roger Williams Park Zoo, Providence Parks Urban Wildlife Refuge and the ARE Program offered teacher training in Project WILD and Project WET national curricula to over 30 Providence teachers, culminating into over 1,200 students learning about their aquatic resources at the USFWS Kettle Pond Visitor Center. Another partnership with the RI Saltwater Anglers Association youth fish camp offers over 200 children an opportunity to learn about fish, how to fish from shore and water, and how to become a water steward. These programs are just a small sampling of the great work our partners and volunteers help us accomplish!

As we plunge ahead, the ARE program will continue to foster these important partnerships with RI's environmental organizations and passionate volunteers. Together, we can continue the mission to encourage all Rhode Islanders to be environmental stewards now and into the future!

Thank you to all of our partners!

RI's USFWS Refuge System, Providence Parks and the Urban Wildlife Partnership, Roger Williams Park Zoo, Narragansett Bay Estuary Research Reserve, RI's National Park Service, Wood Pawcatuck Watershed Association, the Woonasquatucket River Watershed Council, Rhode Island Saltwater Anglers, Trout Unlimited, Rhody Fly Rodders, United Fly Tyers of RI, other divisions throughout RIDEM and many more!



Statewide Hunter Survey

This year, a study was conducted for the DFW to determine hunters' attitudes toward wildlife management and the actions of the DFW. The survey assessed various aspects of hunter participation, behaviors, harvest success, satisfaction, preferences, and demographic characteristics. The final report represents the DFW's first major survey of licensed hunters in 15 years. The study consisted of a scientific, multi-model survey of hunters licensed to hunt in Rhode Island, resident or nonresident, aged 15 years old or older. Hunters younger than 18 needed the permission of a parent or guardian to take the survey.

The survey questionnaire was developed cooperatively by Responsive Management and the DFW. The sample of licensed hunters was provided by the Division, and it included those who had a license to hunt in Rhode Island within the past 3 years. An attempt was made to interview every licensed Rhode Island hunter; therefore, the study was an attempted census rather than a probability-based random sampling of hunters. The survey used a multi-modal approach that included multiple forms of contact (email, mail, and/or telephone) and two survey modes (online and telephone surveys). Surveys were administered from March to June 2022, and Responsive Management obtained 3,021 completed surveys. Among all Rhode Island hunting license holders in the sample, 78% hunted in Rhode Island in the past 3 years. Nearly half of hunters have decades of experience: 47% have been hunting over 20 years. A full breakdown of all results can be [read here](#).

The DFW is grateful to all of the hunters who participated, and appreciates your input as we look to the future of sustainable stewardship of game resources and hunting opportunities for all Rhode Islanders!



The Rhode Island Bumblebee Survey

What's the buzz on RI's bumblebees? The DFW and dedicated volunteers are on a mission to inventory these charismatic and ecologically important pollinators! The Rhode Island Bumblebee Survey (RIBS) is a community science project that aims to assess the status and distribution of Rhode Island's bumblebee and large carpenter bee species. The pilot season of this project ran from April to October 2022 with a small but mighty group of volunteers who tested out the survey protocol in preparation for this project to be open for public participation. The official public launch of the project is planned for April 2023.

Pilot volunteers surveyed bees at a total of 16 sites across 8 different habitat types in RI. A whopping 1,250 bumblebees and carpenter bees were observed by just 14 pilot volunteers! Six species of bumblebee were observed, including the more uncommon golden northern bumblebee (*Bombus fervidus*), pictured on the right.

This project is funded through the US Fish and Wildlife Service's State Wildlife Grant Program. Bumblebees and other pollinators are of conservation concern in RI and across the world, as threats of habitat loss, pesticide use, and climate change negatively impact their populations. Bumblebees are particularly important agricultural pollinators because of their specialized "buzz pollination" method that is highly effective at spreading pollen of many crops including tomatoes, blueberries, and cranberries.

Future plans for these volunteer efforts include creating a comprehensive Pollinator Atlas for the state, a full-fledged inventory and analysis of RI's diverse pollinator species. Stay tuned for our Rhode Island Wild Bee Observer app, launching in 2023, where you can submit observations of any bee species you encounter anywhere in the state. We are incredibly grateful for Rhode Islanders' participation in our community science efforts, and for our volunteers' enthusiasm for conservation!



Rhody Critter Kits

The 2021-2022 school year marked the official launch of the DFW's Rhody Critter Kits program. This program, organized by our Wildlife Outreach staff, provides K-5 educators thematic wildlife curriculum kits, aligned with the Next Generation Science Standards. Each kit contains lesson plans, activities, videos, hands-on learning materials, and other resources curated by Wildlife Outreach staff, with special emphasis on Rhode Island's wildlife species, conservation work, and management practices. Kit topics include bats, birds, reptiles and amphibians, forests, and conservation through the careful management of wildlife resources. We plan to add freshwater wetlands and pollinators to the lineup of kits in 2023. Thanks to funding through the Wildlife and Sportfish Restoration and State Wildlife Grants Programs, the kits are available to borrow free of charge!

Kits were reserved by educators from Barrington to Charlestown and everywhere in between. Over 700 students from 19 RI municipalities engaged with the kits this past school year, and this number is expected to grow! Wildlife Outreach staff has planned several professional development opportunities in 2023 for educators to engage with the kits and gain confidence in teaching their students about local wildlife conservation.

All written materials are available for use anytime online; to borrow the hands-on kits, educators simply fill out an online form to arrange a pickup at either the Washington Park Library in Providence or the DFW Great Swamp Field Headquarters in West Kingston. We have also partnered with the RI Office of Library and Information Services to create a set of kits for children's librarians to request through the state library system.

To learn more about the Rhody Critter Kit Program, or to reserve a kit, visit www.dem.ri.gov/critterkits.



Saugatucket Fishway Improvements & River Herring PIT Tagging Study

The DFW has worked closely with The Nature Conservancy of Rhode Island (TNC) and the US Fish and Wildlife Service (USFWS) to improve existing, outdated fishways on the Saugatucket River. These fishways are extremely important to allow river herring to migrate from the ocean, up into headwaters of freshwater systems to reproduce.

Restoring herring migration pathways has been a multi-year process. In 2015, the inefficient Main Street ladder was extended, moving and reconstructing the entrance, and improving velocities through the fishway. In 2018, the fishway at Indian Lake was enhanced, adding additional weirs and re-aligning weir notches to make passage more efficient. Finally, in 2022, the Palisades fishway was addressed, re-designing and adding baffles to the ladder to improve velocities and the fishway entrance. Also in 2022, the DFW and TNC commenced the first year of a multi-year Passive Integrated Transponder (PIT) tagging survey, with the goal to gauge the success of these improvements. PIT tags do not require external power, but have an internal microchip (similar to the ones used on pets) that is activated when scanned by a specialized reader, giving biologists the ability to identify individual fish.

In a partnership with USFWS and US Geological Survey (USGS), biologists from the DFW and TNC implanted PIT tags into approximately 400 river herring to track their movements through the fishways, in hopes that this data will provide insight on the passage efficiency of the improved ladders. The data collected from this survey is not only important for the success of river herring migrations through the Saugatucket, but it also provides guidance as partners look to improve passage throughout the region and beyond.

We are grateful to our partners on this project, including TNC, USFWS, USGS, Coastal Resources Management Council, and the National Oceanic and Atmospheric Administration!



New Collaborative Hunter Education Course at URI

The University of Rhode Island's (URI) College of the Environment and Life Sciences and the DFW once again joined forces to bring exciting new opportunities to undergraduate and graduate students. A collaboration years in the making, URI's Professor Scott McWilliams brought decades of collegiate teaching and working biologist experience to bear in concert with a collection of DFW's specialized biology, outreach, and hunter education staff.

Ten students were selected among dozens of applicants for this inaugural offering of "Wildlife Conservation & Hunting." Only two of the students had any previous hunting experience, although all were Wildlife & Conservation Biology majors. Meeting weekly, students were first led through the Internal Hunter Education Association (IHEA) approved Hunter Safety course. This standardized course, required for all new hunters in RI and other states, walks through all the safety and ethics information a future hunter needs to know. Unique to the college offering were two live-fire opportunities. A wide overview of firearm types was conducted at the state-run Great Swamp Shooting range, followed by a shotgun range day at Peacedale Shooting Preserve, a local sporting clays course. The remainder of the semester turned the focus to species and topic specific discussions to present a broader understanding of real-world hunting considerations, including information about regulations from DEM's Environmental Police.

Interspersed with hunter education were relevant outside readings relating to new hunter experiences and the role of hunting in wildlife conservation. These extra perspectives, along with the continuing class discussions, were meant to help inform a personal reflective essay requirement for the course.

At the end of the course, students were given the opportunity to partake in a mentored waterfowl hunt supported by the Delta Waterfowl University Hunt Program; nine of the ten students participated. Attempting to harvest an animal was not required, but all participating students did so and gained a better understanding of the process. Following the hunt, all were invited to the DFW's Outdoor Education Office for a post-hunt debrief, sharing of experiences, and wild game meal. Plans for a further refined 2023 course are already in the works!



Thanks to our partners!

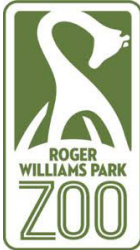


Photo: Dean Birch