

# MR. IAN TREFRY

## FY15 SECDEF EV AWARDS

### NATURAL RESOURCE CONSERVATION — INDIVIDUAL PORTSMOUTH NAVAL SHIP YARD, NAVFAC PWD-ME

#### BACKGROUND:

Mr. Ian Trefry is a Natural Resources Specialist serving as the Natural Resources (NR) Manager and Integrated Pest Management Coordinator (IPMC) for Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Region (MIDLANT) Public Works Department-Maine (PWD-ME) Environmental Division located at Portsmouth Naval Shipyard (PNSY) in Kittery, Maine.

#### POSITION DESCRIPTION:



NAVFAC PWD-ME NR Manager with injured Snowy Owl at PNSY

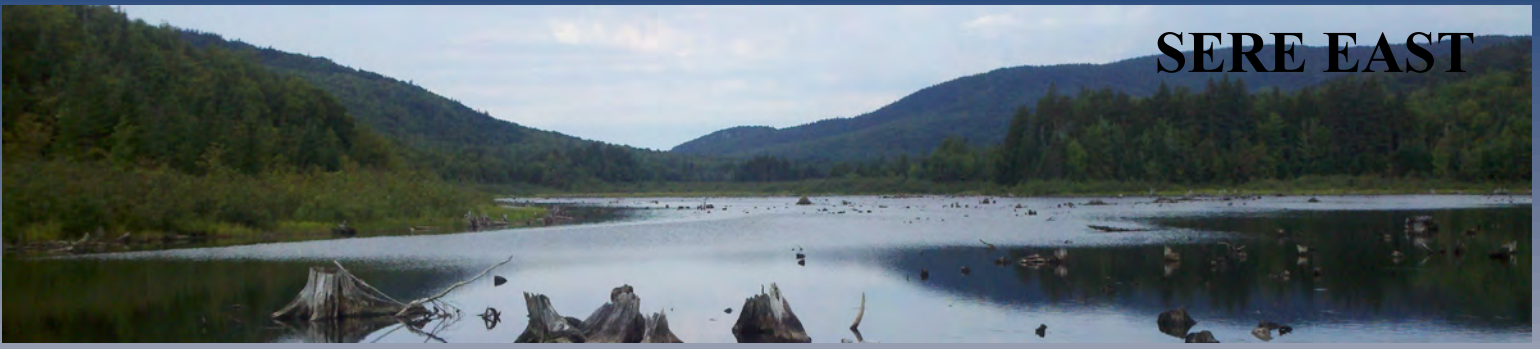
Mr. Trefry manages the natural resources program for PWD-ME which has an Area of Responsibility (AOR) that includes 19 Navy installations and reserve centers occupying more than 16,200 acres of land within six states across the Northeast. Mr. Trefry is directly responsible for the management and implementation of three Integrated Natural Resource Management Plans (INRMPs) and a Consolidated Integrated Pest Management Plan (IPMP) for Navy installations in Maine. Along with PNSY, the Maine Navy installations include the Survival, Evasion, Resistance, and Escape School East Training Facility (SERE EAST), Great Pond Outdoor Adventure Center (GPOAC), Naval Computer and Telecommunications Area Master Station Atlantic Detachment Cutler (Cutler), and Naval Support Activity (NSA) Prospect Harbor. These installations are home to approximately 20 tenant commands with over 7,300 military and civilian personnel.

Mr. Trefry has the substantial responsibility of managing and maintaining the only Endangered Species Act (ESA)

Critical Habitat Exemption within the MIDLANT Region. This exemption is for the Gulf of Maine Distinct Population Segment (GOMDPS) of Atlantic salmon (*Salmo salar*) currently listed as endangered under the ESA. The exemption applies to SERE EAST, Cutler, and GPOAC. Mr. Trefry is also directly responsible for the management of seven additional federally listed species, 17 State listed species, and 77 State and Federal Species of Special Concern. Other natural resources managed by Mr. Trefry include more than 5,000 acres of wetland, 25 vernal pool habitats, 200 miles of freshwater streams, 3 miles of freshwater shoreline, 23 miles of coastline, and 1,800 acres of grassland.

Mr. Trefry's other routine duties and responsibilities include:

- Implementing, updating, and managing three INRMPs and one IPMP;
- Supporting the military mission through resource management and environmental compliance;
- Providing natural resource technical oversight and guidance on National Environmental Policy Act (NEPA) requirements;
- Providing command briefings on natural resource related issues and concerns;
- Ensuring natural resource regulatory compliance for facility and mission actions;
- Maintaining Federal Migratory Bird Depredation and Collection Permits;
- Facilitating nuisance wildlife control and conflict resolution as well as injured wildlife recovery;
- Promoting communication and coordination with local, state, and federal regulators/agencies in six different states and two U.S. Environmental Protection Agency (EPA) regions;
- Coordinating and providing outreach to enhance natural resource awareness; and
- Pursuing and securing partnerships to achieve INRMP and natural resource management goals.



## SUMMARY OF ACCOMPLISHMENTS:

### Overall Natural Resource Management:

Mr. Trefry successfully implemented three INRMPs over the course of the achievement period by programming, planning, coordinating, and completing over 30 projects at three major Navy installations throughout the PWD-ME AOR. These projects resulted in the execution of approximately \$1 million in funding and involved close coordination with three major tenant commands. Throughout this process, Mr. Trefry facilitated outstanding improvements to planning and programming by incorporating stakeholders (i.e., mission tenants, installation personnel, regulatory agencies, and Sikes Act partners) early in the process, streamlining projects and eliminating potential mission delays related to natural resources issues.

Mr. Trefry also leveraged resources through partnerships with various government agencies, non-governmental agencies, universities, and other natural resource groups with a vested interest in installation resources. These partnerships enhanced project scopes, manpower availability, data sharing, and/or equipment usage, resulting in substantial cost and time savings to the Navy. Where applicable, Mr. Trefry sought partnership with universities having a natural resource focus along with their students who were looking for study areas to complete their required course work. In many cases, Mr. Trefry effectively used these resources to fulfill INRMP requirements and address data gaps, making it possible to meet several INRMP goals without use of Navy funding. Mr. Trefry also utilized in-house efforts when available to complete NR-related tasks, such as avian fatality monitoring, bird and bat acoustic monitoring unit maintenance, Monitoring Avian Productivity and Survivorship Surveys (MAPS), vernal pool identification and documentation, and baseline herpetofauna surveys for Maine installations. These and other monitoring efforts assisted with assessing wildlife or ecosystem types and changes over time in relation to stressors, such as disease and habitat changes as well as mission activities.

During this period, Mr. Trefry worked tirelessly in meet-

ing program requirements and constantly sought innovative, cost-effective measures to accomplish program goals and to enhance community knowledge of existing natural resources. Mr. Trefry's efforts led to superb working relationships with regulatory agency personnel and Sikes Act partners, resulting in streamlined project review, integrated survey plan development, timely consultations for endangered species and essential fish habitats, and effective wetland and natural resource permitting processes.

### Mission Enhancement:

Through several innovative partnerships with federal agencies, state regulatory agencies, universities, and non-governmental agencies, Mr. Trefry identified natural resource data gaps and completed baseline survey work for endangered species (i.e., Atlantic sturgeon and northern long-eared bat) and species of conservation concern (i.e., rusty blackbird, Bicknell's thrush, and wood turtle) that could present challenges to mission readiness. One such partnership was that with the United States Geological Survey (USGS) Conti Anadromous Fish Research Station and the National Marine Fisheries Service (NMFS) Protected Species for documentation of Atlantic sturgeon presence in the Piscataqua River which surrounds PNSY.



Orbeton Stream, SERE EAST (Atlantic salmon watershed)

In April 2012, the GOMDPS of Atlantic sturgeon was listed as threatened. Subsequently, in 2014, the Piscataqua River was listed as proposed critical habitat, although no recent data on sturgeon presence exists. This

listing could be significant as PNSY's primary mission is the overhaul, repair, and modernization of the Navy's nuclear-powered submarine fleet and as its facilities include three dry docks and several berths. Extensive ESA Section 7 consultation requirements have the potential to disrupt ongoing and upcoming mission-required facility expansion projects necessary to meet submarine docking requirements. The major in-water work scheduled for these projects will require mitigation measures such as timing windows for in-water work, which could cause delays in construction schedules. Understanding sturgeon presence and life stages in the Piscataqua River have and will continue to support proper planning and scheduling



Atlantic sturgeon research partnership (left to right): Max Tritt (NMFS); Micah Kieffer (USGS); Ian Trefry (NAVFAC PWD-ME)

for mission projects. Mr. Trefry successfully partnered with the USGS (lead sturgeon research agency) and NMFS (technical support and equipment provider) to set up a network of acoustic receivers to monitor tagged sturgeon presence in the Piscataqua and around PNSY. Mr. Trefry proactively secured funding for equipment to support the partnership effort. As a result, the partnership entities tagged 30 sturgeon and established a receiver array covering important habitat areas in the Piscataqua River. Throughout FYs 14 and 15, this partnership continued documenting how and when migrating sturgeon use the Piscataqua River. The information gathered by this partnership is assisting with the knowledge base for the GOMDPS of Atlantic sturgeon and has cemented the Navy's commitment to protect ESA species and natural

resources in Maine. This has improved the ESA consultation process and enabled in-water projects to move forward without costly delays related to natural resources issues and without impact to mission activities. This research project is expected to continue for the next several years and may ultimately assist in the Critical Habitat determination for the Piscataqua River.



Atlantic sturgeon monitoring equipment.

PWD-ME and tenant command missions have all benefited from Mr. Trefry's extensive knowledge of all installations within the PWD-ME AOR. From wetland delineations assisting project planning to advising on culvert maintenance efforts, Mr. Trefry is the go-to person for on-the-ground knowledge of all installation properties.



Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*)



## Land Use Management:

During this period, Mr. Trefry managed multiple natural resources projects focusing on erosion control monitoring and remediation at three installations within Atlantic salmon watersheds. These projects are focused on maintaining installation exemptions from the ESA critical habitat designation. The Maine installations are fairly remote with unimproved roads and drainage systems that could negatively impact Atlantic salmon waters. Mr. Trefry effectively identified resource impact concerns and collaborated with the Public Works managers to properly remedy erosion control issues, which could also impact mission execution by limiting base accessibility. Mr. Trefry also provided periodic training to Public Works personnel on the maintenance of sediment and erosion controls, en-

pest and disease surveys, and Forest Fire Management Plans at the three Maine installations with INRMPs. One major forest management initiative in which Mr. Trefry played a key role is the Readiness and Environmental Protection Integration (REPI) Program now providing conservation easements on 9,728 acres bordering the northern boundary of SERE EAST. This partnership with Trust for Public Land and Maine Appalachian Trail Land Trust preserves wilderness that maintains a realistic, remote environment for SERE EAST field training and buffers the installation from encroachment. The REPI will provide timber harvesting and wildlife habitat on the bordering parcel, a land use scheme that is compatible with the current installation mission. Mr. Trefry's extensive knowledge of the area's natural resources assisted in providing the baseline for encroachment value, easement language, and a long-term monitoring plan for the easement parcel.



Road and drainage repairs at GPOAC. GPOAC is located within the Atlantic salmon watershed.

sured availability of necessary and compliant materials, and inspected construction sites for compliance with Maine Erosion Sediment Control Law and the federal NPDES Storm Water Pollution Prevention Plans. Through frequent and effective communication, Mr. Trefry provided land management technical assistance for all installations, including general permit management as well as guidance for proper BMP installation, tree trimming and maintenance, wildlife management, road grading, native species planting, bee recovery, and pesticide compliance.

## Forest Management:

During this period, Mr. Trefry developed and implemented forest inventories, natural community surveys, forest

## Fish and Wildlife:

In FY14, Mr. Trefry worked diligently to fill data gaps identified during draft INRMP reviews with Sikes Act partners and annual NR Metric reviews with regulatory agencies. At that time, the Navy lacked data on bat species presence, vernal pools, and amphibian and reptile presence throughout the PWD-ME AOR. Mr. Trefry developed and implemented several baseline projects related to filling these data gaps.

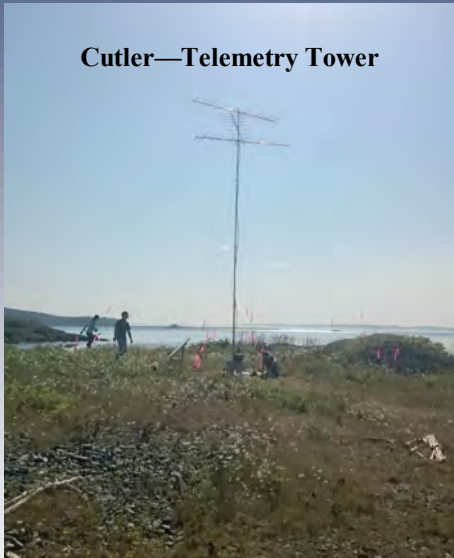
Through these efforts, bat species presence at SERE EAST, Cutler, and GPOAC was documented. Acoustic surveys were successfully completed, documenting the presence of all eight species of bat that occur in Maine at all three installations. In FY15, Mr. Trefry assisted in securing a grant through the Cooperative Ecosystem Studies

Big brown bat (*Eptesicus fuscus*) at SERE EAST



Units (CESU) program with the assistance of NAVFAC Atlantic to perform additional mist net surveys at these installations. To supplement this work and its associated data set, Mr. Trefry partnered with a University of Massachusetts

at Amherst graduate student to nano-tag migratory bat species and to install a telemetry tower at Cutler. This partnership filled a void in the monitoring area network currently established along the Maine coast and will aid in furthering bat conservation efforts.



**Cutler—Telemetry Tower**

Additionally, in FY14, Mr. Trefry worked with NAVFAC Atlantic to complete a comprehensive vernal pool survey at GPOAC. This survey facilitated the update of the GPOAC INRMP, assisted with facility planning requirements, and created educational outreach materials to educate personnel as well as recreational users of GPOAC on the importance of these sensitive species and habitats present at the installation.

In FY15, Mr. Trefry implemented a deer population and winter habitat survey at Cutler. The Cutler installation is strategically important for deer in the Downeast area of the Maine, particularly in Washington County. Because of its size, fenced/secure operations, land management practices, and resident deer herd, Cutler is a model area for studying deer populations in a state with an otherwise low deer population. Due to the coastal influence, the climatic extremes of weather are most often moderated, enhancing survival during the harsh New England winters.

Vegetation is managed to support mission requirements, maintaining a grass/shrub association, and subsequently creating abundant forage for deer throughout the year making this area strategically important for the Maine Department of Inland Fisheries and Wildlife (DI&W) Deer Management Program. As such, Mr. Trefry is collaborating with the Maine DI&W's biologists to better understand the deer population at Cutler for management on the installation, but more importantly, on how to apply the installation model to other areas of the State, assisting with Maine's deer management program goals. This work led to a partnership with the State of Maine to use Cutler as a release site for rehabilitated deer. With the resident deer herd on the base often in open environs, there is ample opportunity for a young, rehabilitated animal to habituate to its own kind and adopt wild behaviors while allowing for ease of monitoring released individuals. In September 2015, this partnership initiative released the first two rehabilitated yearling white-tail deer, and monitoring and tracking efforts are now underway. Other non-Navy release sites had been used by the State in the past, but problems occurred on occasion involving domestic, residential-type nuisance issues (e.g., people feeding, gardening, and attempting to tame). Having a secure site with optimum site characteristics in reasonable proximity to a rehabilitation facility makes Cutler a significant asset for Maine DI&W regional operations.



**NAVFAC PWD-ME NR Manager Ian Trefry (right) and Maine IFW Biologist (left) releasing white-tail deer at NCTAMSLANT DET Cutler.**



**Cutler**

In FY14, Mr. Trefry worked tirelessly to obtain end-of-year funding to award an avian fatality monitoring project at Cutler. Commissioned in the 1960s, Cutler is the world's largest and most powerful communications facility, providing Very Low Frequency communications to submarine fleets throughout the world. The installation consists of 26 towers ranging from 750 feet to 1000 feet in height with associated sky and guy anchor wires that present a hazard to migrating and resident avian species. During the draft INRMP review, the U.S. Fish and Wild-



life Service (USFWS) noted that the INRMP was noticeably deficient in addressing the installation's Migratory Bird Treaty Act requirements. Cutler has been identified as an Important Bird Area by the Institute for Bird Populations, and avian radar data collected in 2013 documented one of the largest migration totals ever recorded in the State of Maine. Mr. Trefry collaborated with the USFWS to develop a scope of work for fatality monitoring that would address the installation's migratory bird requirements while furthering knowledge on avian interactions with communication towers. To obtain legitimate data, 30 percent of the identified hazard area (1,800-acre VLF tower field) was surveyed over the course of peak spring and fall migration periods at five weeks per season. A total of 40 five-acre plots (200 acres total) required reconnaissance over seven-day search intervals. Meeting the required search interval entails searching 10 plots per day over a four-day search week, often requiring 12-hour days and 60 miles of transects searched per week. In FY15, fieldwork for this survey began through in-house survey efforts, contractor survey efforts, and manpower assistance from the USFWS. Without the partnership with USFWS, this effort would not have been fully possible with the resources available. This survey will continue through FY17 and will assist in the development of a Bird and Bat Conservation Strategy for the installation.

Atlantic salmon. A series of electrofishing, gill net, and trap sampling methods were used at each installation to complete baseline fish surveys and to monitor for salmon presence on the installations. This was a collaborative effort between the Navy, Maine DIF&W, and USFWS. During this effort, Maine DIF&W provided six fisheries biologists and two interns, sampling gear (including 2 canoes and the state electrofishing boat), while the USFWS provided their Atlantic salmon recovery biologist and allowed the projects to be conducted under their ESA Section 10 permit for any potential take of salmon that may occur during the survey. Even though no salmon were captured, the results of the surveys continued to support the ESA Critical Habitat Exemption for the installations and honor the Navy's agreements with its Sikes Act partners.



NAVFAC PWD-ME NR Manager Ian Trefry (left) and USFWS Endangered Species Biologist Mark McCollough (right) entering avian fatality data at Cutler



Electrofishing survey for Atlantic salmon at SERE EAST. A collaborative effort between NAVFAC PWD-ME, NAVFAC MIDLANT, Navy Contractor, Maine IF&W, and USFWS

Mr. Trefry completed similar partnering efforts in FYs 14 and 15 at GPOAC and SERE EAST for the GOMDPS of

Over the achievement period, Mr. Trefry's partnership initiatives led to State and Federal agency contributions of manpower in excess of 400 man hours. In addition, equipment used and or loaned to complete the fieldwork performed (e.g., electrofishing boat, seine, gill nets, canoes, acoustic receivers, USGS sturgeon research vessel, and acoustic monitoring equipment) saved the Navy tens of thousands of dollars in INRMP project funding. These efforts demonstrate Mr. Trefry's continuous efforts to improve natural resource data collection as well as to en-



hance opportunities in order to create a more robust program at less cost to the Navy.

#### **Invasive Species Control and Pest Management:**

In FY14, Mr. Trefry developed and implemented invasive species surveys and remedial measure plans at three Maine installations. In an attempt to curb the spread of invasive plants, Mr. Trefry worked through in-house efforts and NAVFAC Atlantic Applied Biology Branch, when available, to control these invasive species. This innovative approach resulted in the reduction of invasive species coverage at GPOAC and Cutler to less than half of its original coverage. In-house efforts by Mr. Trefry in FY15 further reduced the abundance of invasive species at these installations.

#### **Community Outreach:**

Mr. Trefry is a technical representative for the DoD Partners in Amphibian and Reptile Conservation PARC and provides assistance to any DoD facility as related to amphibian and reptile documentation and conservation. Through his active representation, Mr. Trefry reviewed and provided feedback on all DoD Legacy Project proposals related to herpetofauna in FYs 14 and 15 and helped create baseline species lists for National Guard sites in Maine and New Hampshire.

A Certified Wetland Scientist in the State of New Hampshire, Mr. Trefry is on the Board of Directors for the New Hampshire Association of Natural Resource Scientists (NHANRS). NHANRS is a professional organization with the mission of promoting the responsible use of natural resources and the natural resource science profession.

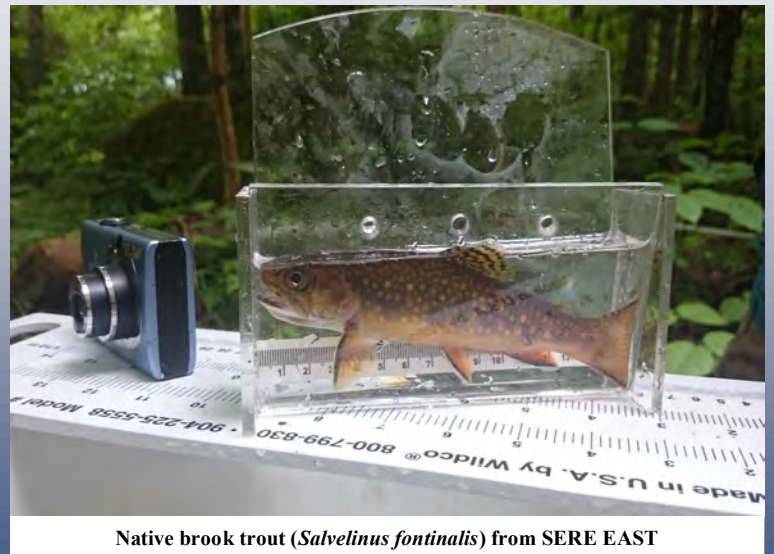
Mr. Trefry is a participating member of the Northeast Bat Working Group. This working group facilitates networking with bat biologists, primarily the North American Bat Conservation Alliance, to work on bat conservation issues. Bat acoustic data collected at three Navy installations was presented at the Northeast Bat Working Group Annual Meeting held in January 2015 in Portland, Maine. This data provides valuable information regarding bat presence in three geographically different locations across the State of Maine.

In addition, Mr. Trefry is a guest lecturer at many local

universities, including the University of New Hampshire and the State University of New York at Cobleskill, on topics such as wetland jurisdiction and policy, vernal pool identification and documentation, and the natural resources profession.

#### **Environmental Enhancement:**

Mr. Trefry's accomplishments over the achievement period led to substantial improvements in the natural resources management program and improved the quality of life for installation personnel and for surrounding communities. The REPI conservation partnership at SERE EAST will aid in buffering the installation from mission and wildlife encroachment issues while conserving significant habitat in the heart of the Maine High Peaks Wilderness Area, a major benefit to the local community. The essential fish and wildlife surveys have led to an increased knowledge base on significant wildlife resources at the installations and thus, have supported improved conservation measures for public trust wildlife species. Mr. Trefry's education and outreach activities throughout the PWD-ME AOR increased general awareness of sensitive habitats and significant wildlife species present at installations. Mr. Trefry's significant achievements enhanced environmental stewardship and benefitted the overall mission throughout the PWD-ME AOR through his assistance with facility projects, recreational activities, and critical mission execution.



Native brook trout (*Salvelinus fontinalis*) from SERE EAST