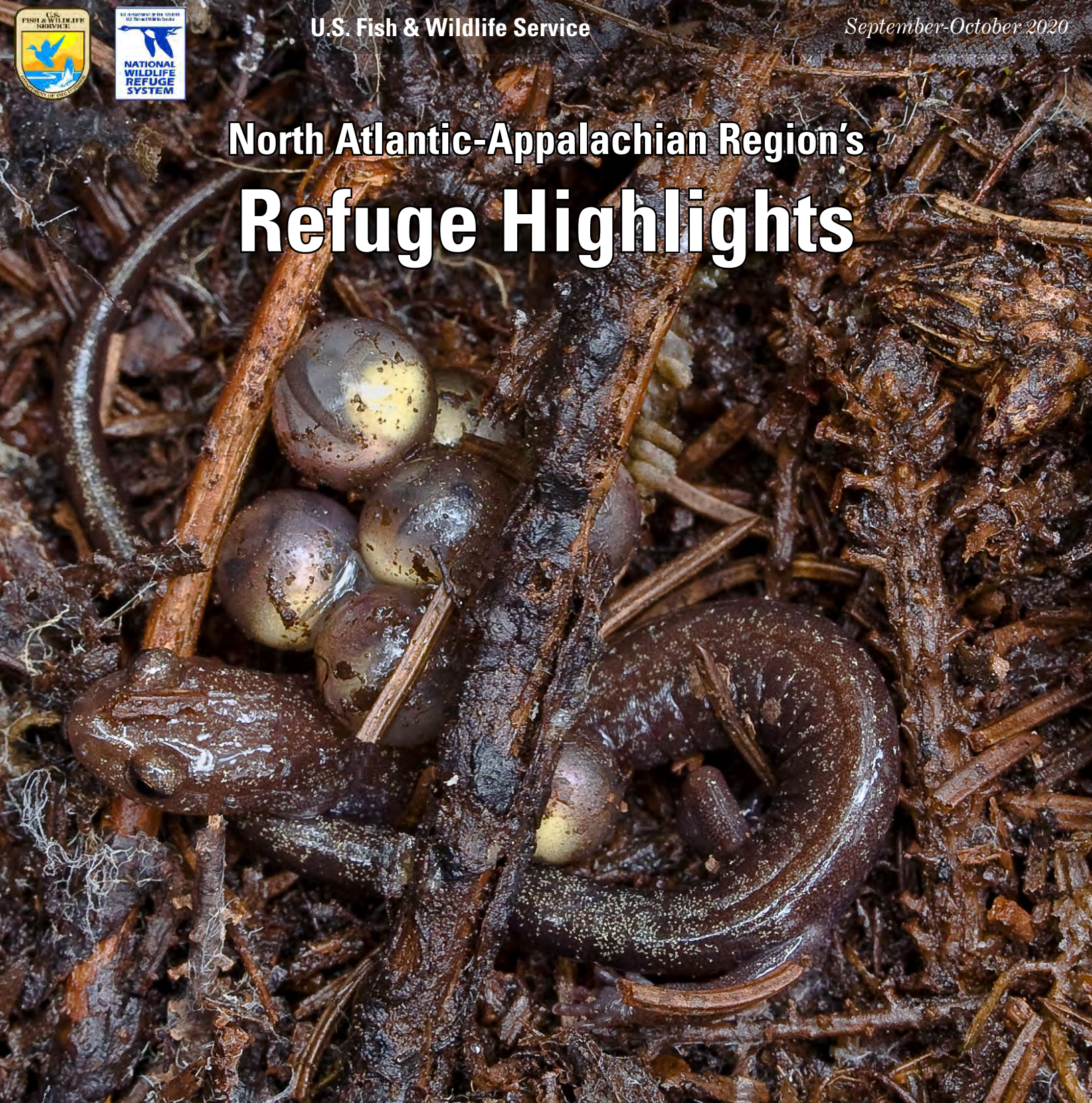




# North Atlantic-Appalachian Region's Refuge Highlights



Kent Mason/USFWS

We hope you enjoy learning about all of the great conservation and outreach work being accomplished on national wildlife refuges in our region! Our Regional priorities, listed to the right, represent the areas where we are focusing our work and investments. We have color-coded each story according to the key listed to the right in an effort to highlight how our efforts are supporting these priorities. For questions about Refuge Highlights, please contact Susan Wojtowicz at [susan\\_wojtowicz@fws.gov](mailto:susan_wojtowicz@fws.gov).



Connecting People to Nature



Supporting Our Workforce



Strategic Conservation

Above: Cheat Mountain Salamander alongside eggs at Canaan Valley NWR.

## Cheat Mountain Salamander Surveys

Canaan Valley NWR in West Virginia is continuing their Cheat Mountain salamander (CMS) initiative with the United States Geological Survey (USGS) to develop a site occupancy model for CMS on the refuge. Due to Covid-19, the spring surveys were not completed. This fall 121 sites were sampled during September and October. Many salamanders were found, including red-backed, dusky, slimy, northern two-lined, and northern spring salamanders. Cheat Mountain salamanders were also found this year, including one with eggs! Drought conditions in the fall may have reduced salamander abundance. Surveys will resume in the spring, with each of the 121 sites surveyed again.



Cheat Mountain Salamander  
*Kent Mason/USFWS*

## Maine Coastal Islands National Wildlife Refuge

### Creating Artificial Burrows for Atlantic Puffins

Maine Coastal Islands NWR staff recently built and installed artificial nesting burrows for Atlantic puffins on Petit Manan Island off the coast of Maine. Petit Manan is one of only four islands in the U.S. to support nesting Atlantic puffins, and lack of suitable nesting habitat has limited colony growth. Winter storms have destroyed natural rock burrows that were located on the perimeter of the island. The new burrows will also enhance monitoring efforts, as staff will be able to access chicks in order to monitor growth and survival rates for future years.



Boat Operator Jim Fortier and Biologist Sara Williams installing artificial nesting burrows for puffins.

*Michael Langlois/USFWS*

## **American Woodcock Banding**

The Nulhegan Basin Division in Silvio O. Conte NFWR was one of three Vermont capture sites for the Eastern Woodcock Migration Research Cooperative, an international research collaboration led by the University of Maine to better understand the migratory ecology of the American woodcock along the eastern seaboard. This study used Global Positioning System (GPS) technology to track the seasonal movement and habitat selection of American woodcock as they travel from their breeding grounds in Canada and northeastern U.S. to their wintering areas in the southern part of the U.S. A total of four woodcock from the Division were captured and outfitted with GPS units. Field work was led by PhD students from the University of Maine. Visit [www.woodcockmigration.org](http://www.woodcockmigration.org) to follow tagged birds as they migrate.

Woodcock Banding

USFWS



## **Ohio River Islands National Wildlife Refuge**

### **Work Begins on a New Wetland**

The Visitor Center unit of the Ohio River Islands NWR in West Virginia, presently features two trails that pass through upland forest, pollinator meadow, and along the Ohio River. But the Ohio River floodplain historically had wetlands. Thanks to a \$10,000 grant by DuPont Company, in partnership with the Friends of Ohio River Islands NWR, the refuge has begun converting a two-acre gravel pit adjacent to the visitor center into a wetland, restoring this important habitat. The wetland will eventually be properly vegetated and include a trail and interpretive signs, accessible to the public and to visiting school groups.

Refuge employee Kyle Goodge lines the gravel pit with clay to create a wetland.

*Michael Schramm/USFWS*

## Pervasive Invasives

As the season winds down for the Pervasive Invasive team at Great Swamp NWR, located in New Jersey, members spent a recent workday in October doing restoration work. With the assistance of refuge staff, volunteers reseeded areas of the Visitor Center septic field with native wildflower seeds, covering areas where mug wort was previously removed. The volunteers also planted several native witch hazel plants after taking out multiflora rose and barberry. By controlling invasives and encouraging native plants, the area supports a wider diversity of insect and bird species.



The Great Swamp NWR Pervasive Invasives Team prepares the ground for native wildflower seed.

*Kathy Woodward/USFWS*

## Potomac River National Wildlife Refuge Complex

### Inventory Monitoring Plan Completed

This September, the Potomac River NWR Complex in Virginia completed an Inventory and Monitoring Plan (IMP) for the three refuges in its complex. This plan documents the strategies used to collect data on wildlife species and habitat attributes. An IMP workshop was held at the refuge headquarters in June 2019, and was attended by Service biologists Christopher Wicker, Rachel Katz, Austin Rizzo, and Jennifer Casey. The team refined the surveys needed to meet the goals and objectives of the Comprehensive Conservation Plan and Habitat Management Plan for the refuges. The IMP runs from 2020 to 2035, or until revised.



The Integrated Waterbird Management and Monitoring survey unit at Great Marsh on Mason Neck NWR.

*Bill Wallen/USFWS*

## **Iroquois Joins the Motus Network**

In October the Iroquois NWR in New York completed installation of a Motus tower at the refuge headquarters with funding from Friends of Iroquois NWR. Motus, a wildlife tracking system coordinated by Bird Studies Canada, tracks tagged wildlife (mostly birds) as they pass receiver towers throughout North America. This tower will provide information about which species are using the refuge as a migration stopover site and where they are coming from. Additionally, the refuge is working with a local researcher to tag purple martins nesting in refuge martin houses to determine feeding areas and migration timing. The tower includes 4 antennas and should detect a tagged animal up to 15 kilometers away.



Motus Tower at Iroquois NWR

*Paul Hess/USFWS*



## **Managing Invasive Asiatic Sand Sedge**

Asiatic sand sedge is an invasive plant of dune habitats that can outcompete and displace native vegetation. The sand sedge was first found in New Jersey in 1929 and occurs in many places along the Atlantic coast. Biologists at Edwin B. Forsythe NWR, are engaged in management of this species to ensure that the refuge's beach and dunes continue to provide high quality habitat for piping plover and other species dependent on the coast. In September, the team surveyed the barrier islands of Little Beach and Holgate for the plant and made follow up visits to apply herbicide where needed.

Little Beach Invasive Sand Sedge at Edwin B. Forsythe NWR.

*Taylor Bothe/USFWS*

## Measuring Subsidence

Understanding subsidence, the sinking of the land surface, is essential to understanding relative sea level rise and impacts to coastal areas. Scientists from Federal, State, and local governments and academic institutions are collaborating in an effort to measure subsidence at over 50 locations across the Chesapeake Bay region, including Eastern Neck and Blackwater NWRs in Maryland. High precision Global Positioning System (GPS) receivers were deployed in October to measure millimeters of change in the Earth's surface. This information will be important in understanding rates of subsidence, variation across the region, and, most importantly, interactions with sea level rise and implications for resiliency and adaptation strategies.

GPS receiver collecting high precision elevation data at Blackwater NWR.

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## John Heinz National Wildlife Refuge at Tincum

### Pollinator Pandemonium Part Two

Over several October weekends at John Heinz NWR at Tincum in Pennsylvania, volunteers, youth crew, and staff worked safely together to create roughly 17,000-square feet of new pollinator habitat. Ambitious in scope, the restoration project involved removing invasive species, laying down biodegradable landscape fabric, leveling out new soil, and finally, planting the native pollinator plants. With help from partners at Audubon Pennsylvania, The Endangered Species Coalition and passionate volunteers, around 16,500 plants were planted in time to settle in before the cold. The final project adds 32 native species to the main parking lot, with varying colors and bloom periods to provide food and habitat throughout the growing season each year.

Volunteers in vests and masks plant milkweed, coneflower, and other native plant species in a newly prepared plot to restore native pollinator habitat.

Lamar Gore/USFWS



## Monitoring Salt Marsh Edge Erosion

In October, staff at Rachel Carson NWR completed the final installation and pre-monitoring data collection at 25 erosion monitoring stations placed on the salt marsh seaward-edge within four estuaries along the southern Maine coastline. These stations have been established to monitor long-term effects of dredging within the Webhannet River and Biddeford Pool estuaries in Wells and Biddeford, Maine. The Mousam River and Little River in Wells are being used as control sites. High-precision elevation surveys and Global Information System geo-processing tools will be used to estimate the volume of sediment change over time and map marsh edge changes.



Dr. Susan Adamowicz (Land Management and Research Development Biologist) and Dr. Karl Stromayer (Refuge Manager) installing a marsh-edge erosion monitoring station at Biddeford Pool in Biddeford, Maine.

*Rachel Stearns/USFWS*



## Planting the Seeds of Success

As dam removal for the Lower Peverly Dam on refuge lands in Massachusetts kicks off this November, Parker River NWR staff have been busy planning for a successful native plant community restoration by procuring the right seeds for the remediation. In addition to working with New England Wildflower Society and New Hampshire Natural Heritage Bureau in identifying the right mix of locally collected seed (Seeds of Success Program), the staff members of Great Bay NWR in New Hampshire have been collecting additional seeds from the project site this October. They have adapted best management practices to discourage colonization by invasive plants, such as using onsite soils, and eliminating fertilizers and soil supplements.

Collected seed are sorted, dried, and will be stored for the winter. These seeds will supplement additional seeds previously collected by Seeds of Success.

*Kiah Walker/USFWS*

## First Time Success for Sandhill Cranes

After being observed for several consecutive summers at Umbagog NWR in New Hampshire, a pair of Sandhill Cranes were documented nesting for the first time! The pair were regularly observed in Sweat Meadows and were believed to have nested there. By late summer the chick was more mobile, and the adults began to introduce it to downtown Errol, including landing practice at the local airport and socially distanced evenings at the local bar and grill parking lot. Below average water levels associated with drought conditions this summer may have contributed to the crane's nesting success.



Sandhill crane pair with recently fledged chick in Harper's Meadow.

Levi Burford/USFWS

## Division of Refuge Law Enforcement

### Increasing Partnerships and Youth Outreach

In September through October, Federal Wildlife Officers have worked to foster the next generation of youth hunters. Officer Barriere recently participated in the Missisquoi youth waterfowl hunt and Officer Williams led Parker River's annual youth waterfowl hunt. In addition, officers in the New England area have focused on apprehending wildlife violators. Officers have successfully partnered with State wildlife enforcement agencies across the area, yielding substantial results. Apprehensions have ranged from cases involving waterfowl hunting over bait in Connecticut, to shooting of a decoy from a vehicle in New Hampshire, to falsification of a deer harvest record in Rhode Island.



New Hampshire State Game Wardens, Fluette and Frye, patrolling with Federal Wildlife Zone Officer Steve Steniger on opening day for waterfowl hunting at Umbagog NWR.

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## Improving Water Connectivity

On Wednesday, October 8, the Potomac River NWR Complex staff, stationed in Virginia, met with Hydrologist Fred Wurster and Biologist David Byrd to discuss several large potential restoration projects. The proposed projects aim to reestablish tidal connections and water flow at selected locations on Elizabeth Hartwell Mason Neck NWR and Occoquan Bay NWR. The staff plans to remove a dike at Mason Neck NWR that was originally established in 1969 to create an impoundment for waterfowl hunting. At Occoquan Bay NWR, the group discussed the possible removal of a large section of the road that divides the refuge and adjacent bay to improve connectivity.



Fred Wurster, David Byrd, and Potomac River NWRC staff at Mason Neck NWR, discussing the possible substitution of a small water control structure with a larger, arched structure, to facilitate water flow.

*Cloe Traylor/USFWS*

## Rhode Island National Wildlife Refuge Complex

### Plover Season a Success

Despite the challenges presented by Covid-19, piping plovers in Rhode Island had a successful 2020 season. In total, 85 pairs nested in Rhode Island and fledged 120 chicks, for a productivity of 1.41 fledglings/pair. Rhode Island NWR Complex manages around 80 percent of the State population on refuge, State, municipal, and private lands through our Shorebird Program, funded through a State wildlife grant. Highlights included three new nesting sites in Rhode Island, and an increase in productivity at Trustum Pond NWR after several years of low fledge rates. We had an excellent team of staff, seasonals, volunteers, and partners who contributed to a successful season.



A piping plover chick forages at Sachuest Point NWR in Rhode Island.

*USFWS/Durkin*

## Tornado Damage Cleanup

Tornado damage to boardwalks and roadways was extensive in multiple areas of the refuge in the wake of Tropical Storm Isaias. Maintenance and fire staff as well as teams of volunteers jumped into action, using heavy equipment to remove debris and level roadways, quickly making them accessible again for both visitors and staff. Our savvy equipment operators utilized dozers and excavators, pushing woody debris off the roadbed and removing downed trees from ditches. Volunteers were dispatched and efficiently repaired the Washington boardwalk. This effectively opened Great Dismal Swamp NWR, located in North Carolina and Virginia, to the public once again.



Equipment operator Justin Perry uses a bulldozer to clear downed trees from the Washington ditch trail.

*Gregg Buckalew/USFWS*

## Division of Natural Resources and Conservation Planning

### Approved Framework for Conducting Forest Inventories

Division of Natural Resources and Conservation Planning (DNRCP) staff just completed a five year effort to develop a protocol for collecting, managing and analyzing forest data on refuges (ServCat [124642](#)). The protocol was developed to assist refuge biologists, foresters and staff to survey and evaluate the composition, structure, and health of forests in our Region. Beyond just collecting forest data, the framework includes a Forest Data Management System (FDMS) to allow refuge staff to analyze and safeguard data and produce final reports. Thanks to all the refuge staff who have conducted forest surveys using the draft protocol, including staff from Umbagog, Moosehorn, Canaan Valley, Great Dismal Swamp, Patuxent, Iroquois, Chincoteague, Ninigret, Assabet River, Oxbow, Mashpee, Wertheim, Aroostook, Stewart B. McKinney, Rappahannock River Valley and James River NWRs.

Forest Protocol cover

*USFWS*



### Protocol Framework for Conducting Forest Inventories

*North Atlantic-Appalachian Region*



Version 1.0

September 2020

## **Black Skimmers from Five Coastal States Recorded**

On October 15, refuge staff observed a flock of approximately 400 black skimmers roosting on Fisherman Island NWR in Virginia. Within the flock were birds with field readable bands from five states, Massachusetts, New York, New Jersey, Virginia and North Carolina, effectively demonstrating migration connectivity and the importance of stopover sites along the Atlantic Coast.



Black skimmer banded at Stone Harbor Point, NJ in 2019 (information courtesy of New Jersey Division of Fish and Wildlife)

*Pam Denmon/USFWS*



## **Phase Two Runnel Project Completed**

Over nine consecutive days in the middle of September, phase two of a marsh restoration project was completed at the Reeds Beach marsh unit of Cape May NWR, located in New Jersey. Runnels (shallow, sinuous channels) were cut into the marsh using a Marsh Master with a special cutter, with the goal of draining water off the supersaturated marsh surface. This project was funded by a National Fish and Wildlife Foundation (NFWF) grant with contributions from Ducks Unlimited and The Friends of Cape May NWR. Refuge staff were adaptive and diligent while working with the contractor, Fauchaux Services.

Refuge staff direct the Marsh Master operator while cutting runnels in the marsh.

*Heidi Hanlon/USFWS*

## Invasive Species Survey at Sayville

The Sayville sub-unit of the Wertheim NWR in New York is a maritime grassland managed by the Long Island NWR Complex. Sayville is home to a number of rare and endangered plant species, including sandplain gerardia (*Agalinis decemloba*) and New England blazing-star (*Liatris scariosa*). Refuge staff worked with the Long Island Invasive Species Management Area Partnerships for Regional Invasive Species Management (LIISMA PRISM) staff to issue a Special Use Permit to conduct invasive species surveys and to develop maps and management recommendations. The survey results will help inform future efforts to manage invasive species.



Sayville Grasslands  
Terra Willi/USFWS

## Parker River National Wildlife Refuge

### Marsh Restoration Techniques

At the virtual Restore America's Estuary Conference, Parker River NWR in Massachusetts and Rachel Carson NWR in Maine shared innovative marsh restoration techniques piloted in the Great Marsh and in Maine to marsh practitioners throughout the nation. In three sessions focused on hydrology, sedimentation, and waves and erosion, the academic researchers, USFWS staff, and local conservation organizations assembled 15 presentations to share how each of those processes affect marsh response, and the innovative restoration techniques developed to work with a changing marsh ecosystem. These presentations addressed many of the strategies identified in the Salt Marsh Business Plan and Saltmarsh Sparrow Conservation Plan.

- rapid re-vegetation
- no need for seeding
- increasing thatch
- Anecdotal sparrow sighting

Biological Technician Lauren Healey shares results of a pilot project at Parker River NWR, using sediment spoils to create nesting islands for salt marsh sparrows.

USFWS

## Surveying for Federally Endangered Sandplain Gerardia

*Agalinis decemloba*, sandplain gerardia, is a Federally endangered grassland plant. The Sayville sub-unit of the Wertheim NWR in New York is a maritime grassland managed by the Long Island NWR Complex. Sayville boasts one of the most abundant populations for *A. decemloba* in New York. Surveys for the plant are conducted annually from late August-early September. The timing of the surveys is particularly important as the plants are best located while they are in full bloom, which is typically one flower per plant per day that drops off by mid-day. This year 6,701 individual plants were counted in Sayville!

*Agalinis decemloba* in bloom at Sayville subunit of Wertheim NWR. White and pink blossoms were observed during the 2020 survey.

Bridget Giblin/USFWS



## Cape May National Wildlife Refuge

### Tree Swallow Staging

Cape May NWR in New Jersey is well-known for bird migration. Every year, large flocks of tree swallows stage at the Two Mile Beach Unit of Cape May NWR. This year was no exception as the sky blackened with flying swallows! The swallows use the open beach habitat and the maritime forest to feed and rest before they head south.



Tree swallows staging at Cape May NWR during fall migration.

Heidi Hanlon/USFWS

## Outer Island Spruce-Up

Staff and volunteers of Stewart B. McKinney NWR in Connecticut recently gathered at the refuge's Outer Island Unit over the course of two days for an end-of-season spruce-up. The workdays included cutting dead trees, removing island fixtures for the winter, and scrubbing buildings inside and out. The historic Elizabeth Hird house, designed and built in the 1960s by the architect who later donated the island to the USFWS, was also cleaned and inventoried, with small repairs made. The refuge hopes to use money from the fund established by Elizabeth Hird to further rehabilitate the house and its furnishings for use by interns, visitors and the Friends group.



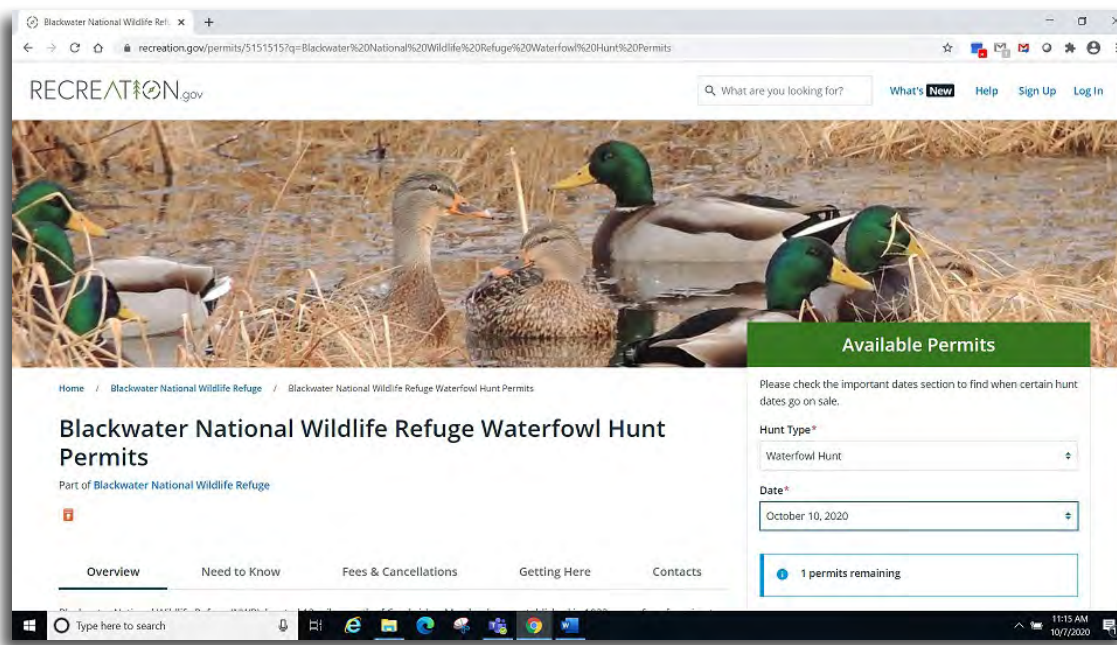
Volunteer Craig Repasz and Administrative Technician Allan Chavez remove pedestrian guardrail chain from the pier at Outer Island. The aluminum gangway, center, also had to be stowed away for winter.

Deanna Broderick/USFWS Volunteer

## Blackwater National Wildlife Refuge

### Hunt Program Permitting Goes Virtual

Blackwater NWR in Maryland has completed transitioning its hunt program from a mail-in application system to an online process through Recreation.gov. The refuge began this in 2019 for deer, impacting over 2,000 hunters. Later, a spring turkey lottery was added, followed by a blind site reservation system for waterfowl season, which went live in October. This is a more efficient, less labor-intensive system, that also makes the permits more accessible to hunters. As a national pilot, we hope the work dedicated to creating several different types of hunts (lottery, unlimited, and blind reservations) will lead the way for other stations to develop a similar system using the templates developed.



All hunt permits for Blackwater NWR are now available online through third-party vendor Recreation.gov.

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## Owl Prowling with Iroquois

On the last day of National Wildlife Refuge Week, we celebrated with education and exploration- a favorite way to #LiveYourWild. Volunteer Chuck Rosenberg joined us at the refuge to deliver some great information about owls and how to ethically view them. Then the group of 14 tip toed through the woods of Iroquois NWR for a chance to see some of western New York's owl species. Chuck dazzled with his owl vocals and brought in three different species of owls, including two eastern screech owls that swooped in on the group, duetting barred owls, and a whole family of great horned owls.



Great Horned Owl  
Gary Stolz/USFWS

## Patuxent Research Refuge

### National Urban Wildlife Refuge Day Celebration

On Saturday October 3, Patuxent Research Refuge in Maryland celebrated National Urban Wildlife Refuge Day. Over 400 visitors came through the gate during the event. Staff estimate that around 200 visitors participated in the event offerings. People had the opportunity to display their artistic abilities at the chalk art area, attend a live birds of prey presentation with Rodney Stotts, or hike the Tram Route Trail (usually off limits to foot traffic). Some visitors discovered Questing, which is similar to a scavenger hunt. Participants collect codes to unlock a box, in order to access a stamp to show they have completed their quest.



Artist Vinceaun Minto from Bowie State University came out to show his talents , designing a beautiful flower filled with butterflies and a hummingbird.

Jason Cangelosi/USFWS

## 2020 Mentored Archery Hunt

John Heinz NWR at Tinicum, located in Pennsylvania, hosted the first of four mentored archery hunts this fall during a warm October weekend. Nearly a dozen hunters stepped into the woods with little to no hunting experience, guided by their volunteer mentors who were either family members and/or experienced hunters. Throughout the experience, participants, local students, and members of the MobilizeGreen youth crew learned about ethical and safe hunting, white tailed deer biology, and safe crossbow handling. Some members of the public opposed the hunt, but it led to a dynamic conversation on social media about the habitat management and conservation benefits of recreational hunting.



A Pennsylvania Game Commission Mentor teaches a MobilizeGreen youth crew member how to safely handle a crossbow.

*Mariana Bergerson/USFWS*



Josh and Rae recording the first story.

*USFWS*

## Edwin B. Forsythe National Wildlife Refuge

### Virtual Program: Refuge Readings with Rae

Edwin B. Forsythe NWR and the Friends of Forsythe NWR, located in New Jersey, are collaborating on an early-childhood learning program called “Refuge Readings with Rae”. The “Rae” mentioned is Rae Griffiths, the new president of the Friends’ group. Each month Rae will read a nature-related children’s book recorded by Ranger Josh Baker, that will be uploaded to the Friends of Forsythe NWR’s website so that kids and guardians can follow along. October’s story was “Outside In”, a tale that encourages kids to create nature inside during quarantine.

## Friends Host Virtual Big Sit

Normally the Friends of Great Swamp NWR would celebrate National Wildlife Refuge week by holding The Big Sit, leading Sunset Walks into the impoundments and enjoying a special Second Sunday program. In 2020 the Refuge celebration went virtual. Participants in The Big Sit, a stationary bird watching event, wore masks and social distanced. Eighty-one species of birds were sighted from the refuge overlook, tying an all-time high. The Friends created a live Zoom presentation in celebration of the Refuge System, the refuges in the Lenape Complex, and featured photos of past sunset walks. There was a new post every day on Facebook during National Wildlife Refuge Week highlighting a different person and their passion about Great Swamp NWR in New Jersey.



Friends of Great Swamp peer through spotting scopes to observe birds at the wildlife overlook.

*Kathy Woodward/USFWS*

## Silvio O. Conte National Fish & Wildlife Refuge

### Mollie Beattie Bog Boardwalk Upgrade

The NorthWoods Stewardship Center ProCrew recently completed the construction of Silvio O. Conte NFWR's Lewis Pond boardwalk and moved onto replacing the Mollie Beattie boardwalk, located at the Nulhegan Basin Division in Vermont. The Mollie Beattie boardwalk was named after the former Director of the Service and showcases an exemplary black spruce bog community. The replacement boardwalk will provide visitors the opportunity to experience walking in a unique black spruce bog. The new structure is being built at a higher elevation to allow for native plant communities to grow underneath the elevated platform.



The new Mollie Beattie observation platform

*USFWS*

## **Increased Fishing Access**

Cherry Valley NWR in Pennsylvania has expanded their fishing access to include a section of the Cherry Creek located at the Larsen's Lane Tract. This expansion, which took effect on September 1, has doubled the number of sections along the Cherry Creek that are now open to catch-and-release fishing on refuge property. Anglers will utilize a newly constructed parking lot to access the new fishing location, which will provide opportunities to fish for both brown and brook trout.



The first fish, a brown trout, caught on September 7 at the newly-opened fishing access point along the Cherry Creek at the Larsen's Lane Tract.

*Eric Baird/Brodhead Chapter of Trout Unlimited*



## **Announcing the New Kayak Challenge!**

It's a simple idea: kayak to all 20 of main islands at Ohio River Islands NWR to complete the challenge and win a prize! Participants must take a selfie with each of the special kayak challenge island signs and can mark off the islands as they go on their special "Kayak Challenge" t-shirt. When a kayaker shows all 20 island selfies to a refuge ranger, they receive a prize... But of course, the journey is its own reward! Each sign also features a web address link to a detailed history of the island so they can learn about the refuge along the way.

A kayaker on the Ohio River adjacent to Buckley Island.

*Michael Schramm/USFWS*

## Friends Host Local Environmental Club

On October 19, the Friends of Assabet River NWR in Massachusetts hosted the Lincoln-Sudbury Regional High School (LSHS) Environmental Club for a refuge trails cleanup. Seventeen members of the club participated in the cleanup event at the refuge. Participants split into two groups to focus on two different areas of the refuge. They adhered to all COVID-19 safety protocols and wore face coverings, maintained a physical distance of 6 feet when possible, and sanitized often. The Club plans to host monthly cleanups at the refuge in the spring.



Lincoln-Sudbury Regional High School Environmental Club members participated in a cleanup of refuge trails.

*LSHS Environmental Club*

## Occoquan Bay National Wildlife Refuge

### Partnership to Install Eco-counters

In October 2019, the Potomac River NWR Complex partnered with the National Park Service to purchase eco-counters for new sections of the Potomac Heritage National Scenic Trail (PHNST). This October, staff from the Potomac River NWR Complex and Prince William County worked together to install the first eco-counter at the newly finished section of PHNST at Occoquan Bay NWR in Virginia. The counter, which took 2.5 hours to install, counts both pedestrians and bicyclists, and documents the direction they are traveling. Staff are excited to collect, analyze, and use this data jointly with their partners to better understand visitation patterns of the PHNST in Prince William County.



USFWS Visitor Services Specialist Carina Velazquez-Mondragon digs a shallow trench for the new eco-counter at Occoquan Bay NWR.

*Naomi Fireman/USFWS*

## Archery Trailer provides Outdoor Recreation

In September and October, Wallkill River NWR in New York delivered their popular archery trailer to nearby Ogdensburg Elementary School for students to use during their Physical Education classes. With a hybrid learning schedule restricting class size to 10 students, it was easy to maintain social distancing outdoors. Students wore face masks and all bows and arrows were sanitized before and after each use. Students and teachers were universally delighted to have this opportunity.

An elementary school student proudly displays his excellent results.

*Scott Lenhart / USFWS*



## Silvio O. Conte National Fish & Wildlife Refuge

### Engaging Visitors in Time Lapse Photography

Silvio O. Conte NFWR has teamed up with the Chronolog Project to engage visitors in capturing photos of the refuge that will be used in time lapse videos. Located at three of Conte's Divisions (Massachusetts, New Hampshire, and Vermont), the Chronolog stations focus on a particular view or spot of the refuge, using the photos to record changes over time. When visitors upload their photos to the site, they receive an email telling them about the refuge, the location they photographed and how their photo will be used. You can view all three of our projects at <https://www.chronolog.io/project/Silvio-O.-Conte-National-Fish-and-Wildlife-Refuge>.

A chronolog station at the Pondicherry Division, located in New Hampshire.

*D Govatski/USFWS*

## Urban Partnership Celebrates Another Success

The Elizabeth Urban Wildlife Refuge Partnership celebrated a big milestone on October 7 with the dedication of the Trotters Branch Outdoor Nature and Education Center at Phil Rizzuto Park in Elizabeth, NJ. Lenape National Wildlife Refuge Complex staff joined staff from Groundwork Elizabeth's Green Team, project sponsor Phillips 66, local elected officials, and the Friends of the Great Swamp NWR in a ribbon-cutting in front of the new interpretive trail.



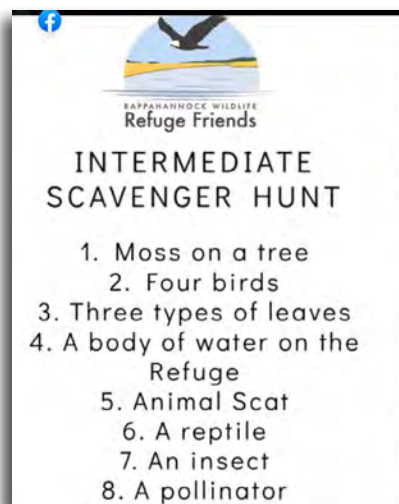
Lenape National Wildlife Refuge Complex Project Leader Mike Horne and Friends of Great Swamp NWR board member Kathy Woodward join staff from Groundwork Elizabeth and local elected officials in the ribbon cutting event for the new Nature and Education Center.

Jared Green/USFWS

## Rappahannock River Valley National Wildlife Refuge

### Celebrating Refuge Week

Chase Mullins, Visitor Services Intern at Rappahannock River Valley NWR in Virginia, worked hard to compile virtual media to celebrate Refuge Week (October 11-17) with our Facebook followers. The diverse media included a virtual trail walk with Biologist Lauren Cruz and Friends Volunteers Charlie and Sara Lex; a wildlife scavenger hunt led by Chase; a fishing tutorial with Refuge Volunteer Bruce Callis; a fun and factual "Which Rappahannock River Bird are you?" personality quiz; and many other exciting posts. In total, social media posts during Refuge Week reached 6,600 people, with 850 engagements and over 2,100 video views! This was more activity than in the entire month of August, a true accomplishment for our rural refuge. We hope to continue our virtual interpretation and keep the community interested in Rappahannock River Valley NWR.



Student Conservation Association Visitor Services Intern Chase Mullins

USFWS

## Trail Rehabilitation

Erie NWR in Pennsylvania received over \$120,000 from the Regional Office deferred maintenance funding to repair Muddy Creek Holly Boardwalk. The trail was closed for two and a half years due to safety concerns. The wood planks stayed wet due to being under a closed canopy and became too slippery and dangerous. A contractor replaced five bridge crossings and repaired broken planks on the three quarter-mile boardwalk. Staff and volunteers took on the large task of prepping and spraying a non-skid polymer coating (3 coats required with an industrial texture sprayer) on the entire boardwalk. The staff have received many accolades from visitors regarding their appreciation of all the hard work involved to rehabilitate the trail. Now visitors can enjoy it with their families, strollers, and wheelchairs.



Muddy Creek Holly Trail

*Deb Sauers/USFWS Volunteer*



## New Hellcat Boardwalk Trail Opens

Friday, October 9, turned out to be a perfect day for a trail opening at Parker River NWR in Massachusetts. Gathered before a big red ribbon at the parking lot 4 trailhead, refuge staff, partners and a number of other dignitaries celebrated the official reopening of a vastly improved Hellcat Boardwalk Trail. Made possible with funding from the Federal Highway Administration, the much-loved and used boardwalk is, for the first time, entirely accessible to those with mobility challenges. New boardwalk features include observation decks providing expansive views of diverse wildlife habitats and the Atlantic Ocean.

Refuge Manager Matt Hillman was joined by partners and other dignitaries to celebrate the opening of the new Hellcat Boardwalk Trail.

*Matt Poole/USFWS*

## **An Odd Identification**

Odd weather and a Halloween blue moon brought a smattering of noteworthy birds to Back Bay NWR in Virginia, throughout the months of September and October. Birds spotted by staff and volunteers included American golden-plovers, tricolored herons, an American avocet, a clay-colored sparrow, a long-billed curlew, and an unusual number of northern pintails. An intern spotted a Hudsonian godwit, which was initially identified as a bar-tailed godwit. This identification led to heated debate amongst birders, but was put to rest after the discovery of an unambiguous photograph.



A Hudsonian godwit midflight.  
*False Cape State Park Staff*

## **Canaan Valley National Wildlife Refuge**

### **Glade Run Stream Bridge Crossing**

Canaan Valley NWR staff and volunteers completed the construction of an elevated boardwalk on South Glade Run Crossing Trail in Davis, West Virginia. The 60-foot boardwalk provides visitors with a safe way to cross Glade Run Stream by hiking, biking, or horseback riding. It also allows visitors to explore the deepest parts of the refuge while preserving the stream habitat and wildlife that exists in the middle of Canaan Valley NWR.



Elevated boardwalk built across Glade Run Stream.

*Caleb Stutler /USFWS*

## Restoring an Off-Trail Path

This summer, visitors to the Carson Trail in Wells, Maine must have been bitten by the adventure bug. An off-trail path leading into and across the adjacent salt marsh grew to a 5-foot wide path over the summer, trampling the fragile salt marsh grass. On October 21, staff installed symbolic fencing with signs to discourage visitors from straying away from the designated trail. They also planted 19 refuge-grown northern bayberry bushes along the marsh-upland edge to disguise the new path. With the restoration area off-limits to visitors, staff expect the salt marsh grass to recover over the next few summers.



Nineteen northern bayberry bushes, propagated at the refuge greenhouse this summer, were used within the restoration fencing along the trail.

*Rachel Stearns/USFWS*

## **Edwin B. Forsythe National Wildlife Refuge**

### Local Organizations Partner for Beach Clean-up

Alliance for a Living Ocean and the Holgate Taxpayers Association teamed up with Edwin B. Forsythe NWR in New Jersey to organize the annual beach clean-up at Holgate on October 12, led by Deputy Refuge Manager Rich Albers. Volunteers removed over 900 pounds of debris and 1500 pounds of wood and lumber, showing just how far trash can travel. Hopefully more small clean-ups will be scheduled, helping to beautify the refuge and keep wildlife from digesting the “bad stuff”.



Seasonal Park Ranger Carsten Bischoff registering volunteers.

*Rich Albers/USFWS*

## The Big Sit! at the Refuge

The Big Sit! was born in 1992 by members of the New Haven Bird Club. During this event, birders world-wide spend up to 24 hours in a 17-foot circle at any location they choose, identifying as many birds as they can. This year on October 11, two of these teams were at Stewart B. McKinney NWR in Connecticut at Salt Meadow (54 species recorded) and at Milford Point (107 species recorded). The day was beautiful, and everyone had a great time! Find out more about the Big Sit! [here](#).



Big Sit! teams on the refuge, identifying and counting bird species.

*Craig Repasz/USFWS*

## Occoquan Bay National Wildlife Refuge

### E-bike Photoshoot

On October 22, a team of five ventured to Occoquan Bay NWR, in Woodbridge, Virginia, to address the need for public domain photos depicting recreational use of e-bikes at NWRs. The day began cloaked in fog, but by noon, the colors of Occoquan Bay NWR sang out in autumnal glory. In a spooky coincidence, Order No. 3376: Increasing Recreational Opportunities Through the Use of E-Bikes was issued throughout the DOI exactly one year prior to the photoshoot.



Michael Carlo takes a photo of USFWS employees Ashleyann Perez-Rivera and Ariel Martinez posing with e-bikes at Occoquan Bay NWR.

*Naomi Fireman/USFWS*

## **Local Scout Helps Pollinators**

Visitor Services Specialist Kelsey Mackey has been working with a local girl scout, Abby, to complete her Girl Scout Gold Award project at Assabet River NWR in Massachusetts. Abby organized her second volunteer service day at the pollinator gardens in front of the visitor center. On a warm September day, the group finished weeding and mulching the gardens. Kelsey and Abby will work together to plant additional native plants in the spring.



Two of the four pollinator gardens in front of the visitor center after the second volunteer service day.

*Kelsey Mackey/USFWS*



## **Accessible Trail Upgrades**

Over two miles of the trails at Wallkill River NWR in New York received resurfacing to meet Americans with Disabilities Act standards. Completed on October 2, the upgraded trail extends north and south from the refuge's popular visitor hub at Owen's Station Crossing. Wheelchairs, scooters, and strollers are better able to handle the new substrate, allowing people of all abilities better access to birdwatching, fishing, and enjoying the refuge. Ray Cramer, a long-time refuge volunteer, hopped on the trail right away and sent these kind words: "...I thought the days of "walking" the trails at Owens Station were long gone. My new scooter and the [resurfaced] trail are a delight".

Ray Cramer, refuge volunteer, approves of the upgrades. Many other folks do as well! We've already seen an increase in new users on the trail.

*Jean Cramer/USFWS Volunteer*

# Virtual National Wildlife Refuge Week

October 11 kicked off National Wildlife Refuge Week 2020. To connect with the public, Iroquois NWR in New York posted a bird word find on Facebook, encouraged people to share #LiveYourWild adventure stories, educated the public about the National Wildlife Refuge System, and spoke to our namesake, the Haudenosaunee (or Iroquois) Confederacy. On Friday, the Refuge partnered with Trivia716 to host the virtual trivia event. Fifteen people attended, including nine youth. Erin Meskill of Buffalo won a hiking book, blue goose passport, and some stickers donated by the Friends of Iroquois NWR. We received comments from people saying, "It was awesome!" and "I hope we can do it again. Fun!"

Trivia question from Wildlife Trivia at Iroquois NWR.

Ryan Bloom

★ Points: 0

👤 Ryan ▼



This Trivia Game has 26 question(s). Questions will get updated by your host.

**Q13** Seen in the image here, what species of fish accompanies the Canada goose on the original logo for the US Fish and Wildlife Service?

0:31

100 Points

## Stewart B. McKinney National Wildlife Refuge

### Distressed Kayaker Rescued

On October 15, staff and volunteers of Stewart B. McKinney NWR in Connecticut were returning from Outer Island when a kayaker a quarter of a mile away capsized his boat. Refuge manager Rick Potvin quickly moved the Service's motorboat toward the shore of Horse Island, where the distressed kayaker was struggling to hold his overturned boat. Volunteers tossed a lifeline to the struggling kayaker, who immediately grabbed hold and managed to pull himself into the Service boat. Staff and volunteers then got his kayak emptied of water and secured for tow. Within fifteen minutes, everyone was safely back on land at Stony Creek – and happy at the outcome.

Refuge volunteer Bob Henninger, foreground, helps the grateful kayaker haul his boat back to his vehicle.

Ginny Baltay/USFWS Volunteer



## Marsh Master Training

Heidi Hanlon (Wildlife Biologist) and Noel Turner (Hydrologist) have undergone Heavy Equipment Safety Training (HEST) for the Marsh Master! The staff were trained on the Marsh Master to help assist with marsh restoration projects. After a restoration project in 2019, the staff realized the need to have more personnel trained to use the Marsh Master. Their training was put into action during a restoration project this fall, when Noel and Heidi pulled a stuck Marsh Master with a ditcher out of the muck so that the project could continue. Special thanks to Tim Donnelly (Maintenance) for spending the day training staff so that they felt comfortable while operating the Marsh Master.



Heidi and Noel during the hands-on portion of the Marsh Master training.

*Tim Donnelly/USFWS*

## Parker River National Wildlife Refuge

### Online Volunteer Celebration!

A long-planned celebration of the volunteers of Parker River NWR in Massachusetts was set to occur last March, but never took place due to the pandemic. Concerned about the growing feeling of disconnect between volunteers and their refuge, staff decided to plan and deliver a virtual volunteer appreciation event. That event, which went “live” on October 21, was comprised of two parts: a brief video featuring refuge staff expressing their appreciation of the volunteers, followed by a live raptor program delivered by Jane Kelly, of On the Wing. Later, the entire recorded program was made available via YouTube.



Jane Kelly of On the Wing delivers a program to volunteers via a live online broadcast from an empty visitor center classroom.

*Michael Langlois/USFWS*

## Prioritizing Safety in Virginia

On October 27, the Potomac River NWR Complex staff and volunteers, located in Virginia, met with Service Law Enforcement Officers Matt Byrer and Mike Hinton to discuss how to be a “good witness” when observing problematic situations that occur on the refuges in the complex. The officers emphasized non-confrontational tactics, and proposed discreet methods for recording and reporting incidents such as trespassing, vandalism, parking violations, and improper recreation. Many of the concerns voiced by the attendees were addressed following the presentation and the participants now feel more equipped to handle difficult scenarios that unfortunately occur frequently on the refuge properties.



Potomac River NWR Complex staff and volunteers learning how to address unlawful behavior at the refuges.

*Cloe Traylor/USFWS*

## Assabet River National Wildlife Refuge

### Friends Host Peer to Peer Workshop

On September 26, the Friends of Assabet River NWR in Massachusetts hosted the first session of a three-part virtual Peer to Peer Workshop. Facilitated by the esteemed Andy Robinson, a professional consultant for non-profit organizations, the Friends of Assabet River NWR, Friends of Mashpee NWR, Friends of Parker River NWR, Friends of Monomoy NWR, and Friends of Rachel Carson NWR participated in breakout groups and learned about goal setting, sustainable business models, strategic planning, board development, volunteer recruitment and management, etc. The Friends of Assabet River NWR were able to plan and host the workshop through a National Fish and Wildlife Federation grant.



A screen capture of the virtual Peer to Peer Workshop.

*Linh Phu/USFWS*

# The Urban Wildlife Conservation Program Approach

- Guided by the **Standards of Excellence**
- Strong focus on Partner Schools in our target community
- Work collaboratively with the community to **build trust at every level**
  - Educate -> Engage -> Connect
- Support, energize, and activate community spaces
  - Programming and Education
  - Pollinator Corridors
  - Infrastructure



## Presentation at National Conference

Environmental Education Supervisor Brianna Amingwa, and Education Specialists Kelly Kemmerle and Kelly Quain, based at John Heinz National Wildlife Refuge at Tinicum in Pennsylvania, were selected to present at this year's North American Association for Environmental Education's Annual Conference. The virtual conference was held the week of October 13 with almost 2,000 folks from around the world in attendance. The staff highlighted the Service's Standards of Excellence and shared best practices for equitable, inquiry-based lessons that are student and nature centered in their interactive presentation entitled "Nature is Lit!: Engaging Youth Through Cultural Relevancy". The presentation was enthusiastically received by over 140 live viewers.

Brianna Amingwa's presentation on the Urban Wildlife Conservation Program.

*Kelly Quain/USFWS*

## Rachel Carson National Wildlife Refuge

### Rachel Carson Staff Hold In-Person Lunch

With the pandemic and working from home, staff at Rachel Carson NWR have been missing their coworkers! On October 7, the entire staff decided to take a break from their busy schedules to hold an in-person lunch and socialize together for the first time since March. The lunch was held outside at the new headquarters acquisition on a beautiful fall afternoon. As a bonus, staff members were able to use the new picnic tables the Youth Conservation Corps crew constructed this summer.



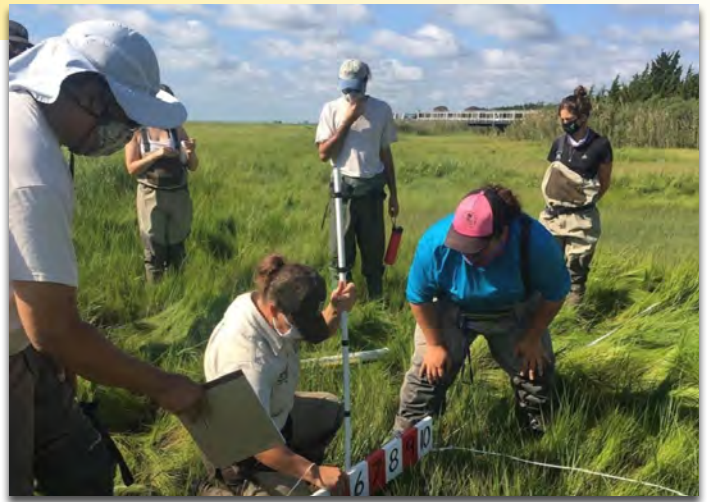
The staff of Rachel Carson National Wildlife Refuge.

*Rachel Stearns/USFWS*



The Camacho family participating in the Latino Conservation Week soap-making virtual workshop offered by Iroquois NWR, which tied in conservation and sustainability.

*Kelly Camacho*



Edwin B. Forsythe NWR biology team and Barnegat Bay Partnership demonstrating vegetation measurements using the rapid assessment protocol.

*Yianni Laskaris/USFWS*

## RAPPing up 2020

Despite a challenging year with the onset of COVID-19, refuges' perseverance and adaptation allowed us to meet most performance measures. Through the Refuge Annual Performance Plan (RAPP), field stations annually report on actual performance for the current fiscal year and set the next year's performance targets for a variety of metrics ranging from habitat management to public uses, recreation and volunteers.

In 2020, most aspects of our biological program were not negatively impacted by COVID. Unfortunately, both the number of refuge acres infested by non-native invasive plants and the number of invasive animal populations increased by seven percent. Now with safety protocols in place, we can take steps to address this increase despite COVID.

The public sought ways to get outside in 2020 and we saw significant increases in the number of pedestrians, boaters, cyclists, hunters and anglers. This year alone the total number of visitors to our refuges in legacy Region 5 increased by almost 1 million people! This is the largest increase in visitation we've seen since we started collecting RAPP data in 2005. Notably, special events on- and off- the refuges increased by 218,956 participants. This was the result of adapting the way we share material with the public by implementing more virtual programming. Talk about making lemonade out of lemons! Let's take a moment to celebrate the accomplishments we've made this year despite challenge and uncertainty. Great job everyone!

