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National Public Lands Day 2019

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National Environmental Education Foundation
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**DEPARTMENT OF DEFENSE
LEGACY RESOURCE MANAGEMENT PROGRAM (17-086)**

National Public Lands Day 2019

On September 28, 2019, the National Environmental Education Foundation (NEEF) celebrated National Public Lands Day (NPLD) along with 2,117 sites across the nation. As part of the 26th annual NPLD, approximately 156,093 volunteers visited public lands sites across the nation to contribute an estimated \$15.9 million in improvement projects. Events took place in all 50 states, the District of Columbia, and US territories. Many NPLD events included an environmental education component to teach volunteers about land stewardship. In 2019, NPLD focused on the importance of biodiversity and conservation. Sites were encouraged to include projects that would rehabilitate degraded habitats and promote the conservation of their public lands in the years to come.

The Department of Defense (DoD) provides funds to NEEF for NPLD projects on military lands open to the public for recreation. To date, NPLD has received over \$3 million through the Legacy Resource Management Program. In 2019, a total of \$72,401.07 was distributed to installations for materials and supplies. These funds were used to enhance DoD lands through various cultural and natural resource improvement projects.

Participating in NPLD provides natural and cultural resource managers with the means and labor to complete small installation-specific projects that may not otherwise get done due to budget or staffing limitations. NPLD projects improve habitat and biodiversity for common and rare species alike, often reducing the need for intense management of these species.

NEEF received 23 applications for Legacy Resource Management Program awards of up to \$9,500 each for 2019 NPLD projects. In September 2019, NEEF notified 13 sites that they were selected to receive an NPLD DoD Award. This year, funds were not distributed until after the official NPLD event date which proved challenging for awardees. The delay in fund distribution caused postponements or cancellations of events. Most events were pushed into 2020 because of timeline changes which, unfortunately, then resulted in coronavirus delays, and the eventual cancellation of many in-person volunteer events. Furthermore, due to the mandates and public health guidance established because of the coronavirus pandemic, three sites withdrew from the 2019 Legacy Resource Management Program. Those funds were transferred to the 2020 DoD Legacy Resource Management Program which allowed funding for more installations participating in NPLD 2020.

Sites that withdrew:

- Fort Bragg, Endangered Species Branch
- Fort Drum
- 733d Civil Engineer Division, Environmental Element

Legacy Resource Management Program funds were awarded by NEEF to sites via direct payments to the installation or reimbursing vendors for all items purchased that pertained to the awarded project. The branches awarded Legacy Resource Management Program funding consisted of one Air Force, two Army, three Army/Air National Guard, and four Navy sites.

Approximately 333 volunteers took part in 140 hours of various natural and cultural resource improvement activities that were offered at the now 10 funded military installations. Many Legacy Resource Management Program sites organized natural resource rehabilitation projects to improve habitat for pollinator species, remove invasive plants, reduce environmental degradation caused by human use, enhance waterways, reduce erosion, maintain trails, plant native trees and wildflowers, and more. The cultural resource activities included building a traditional Hawaiian structure, collaborate with indigenous tribes of America to promote natural resource conservation and cultural appreciation, and holding educational programming around the environmental and cultural history of installations.

The COVID-19 pandemic has fundamentally changed the way Americans can engage with public lands. From iconic national parks and military installations to local urban green spaces, the threat of COVID-19 has made it

extremely difficult - if not impossible - for many land managers to host large in-person events on public lands. During the 2019 award program, the coronavirus put a halt on all projects due to public health lockdowns in March of 2020. Once lockdowns were lifted public health mandates required physical distancing practices and gatherings in groups of six or fewer people. This reality significantly impacted the handling of 2019 NPLD projects in numerous ways requiring a range of flexible approaches for completing projects. These approaches included requiring project managers to implement covid safety protocols for all in-person events and allowing project managers to finish their incomplete projects without outside volunteers. Although different approaches were utilized by project managers, installations were still able to engage a significant number of volunteers despite having delayed projects. Unfortunately, this year's NPLD needed to look a little different. While public land sites were still able to host in-person events, NEEF focused on agile engagement approaches and supporting innovative virtual events designed to engage volunteers and connect people to public lands from the safety and comfort of their homes.

2019 DoD Legacy Award Project Output Totals by the Numbers:

5 miles of trail building or maintenance

9,014 native plants added

29 installation structures and facilities built, rebuilt, or repaired

1,250 pounds of trash collected and disposed

15,221 square feet of invasive vegetation removed

827,640 square feet of land restored or maintained

3 miles of waterway restored or maintained

12 cultural resources or historical properties affected

Legacy Sites 2019

United States Air Force

Hurlburt Field Air Force Base | Florida

Amount Awarded

\$5,475.72

United States Army

Fort Belvoir | Virginia

Army Natural Resources Program (O`ahu) | Hawaii

Amount Awarded

\$3,303.87

\$9,465.98

United States Army/Air National Guard

Arizona Army National Guard | Arizona

Texas Military Department | Texas

Camp Ripley | Minnesota

Amount Awarded

\$9,500.00

\$9,500.00

\$4,780.80

United States Navy

DoD/MCIEast/MCB Camp Lejeune | North Carolina

Naval Weapons Station Seal Beach | California

NAVFAC Hawaii | Hawaii

Naval Support Activity Hampton Roads | Virginia

Amount Awarded

\$4,452.00

\$9,500.00

\$9,267.20

\$7,155.50

TOTAL

\$72,401.07

The United States Air Force



Hurlburt Field Air Force Base | Florida

2019 Hurlburt Field Grace Brown Nature Trail Boardwalk Repair and Trail Cleanup

Project Date: September 27th, 2019; November 8th, 2019

Project Summary: Hurlburt Field Air Force Base hosted volunteers over two workdays and completed environmental restoration, trail building and maintenance on the Grace Brown Nature Trail.

On the main event day, September 27th, Hurlburt Field AFB hosted volunteers to perform environmental restoration on the Grace Brown Nature Trail. The Grace Brown Nature Trail is the only nature trail on Hurlburt Field and is utilized as an outdoor recreational trail. The trail is located along the Santa Rosa Sound, and meanders through beautiful maritime oak hammocks, bridges across blackwater streams, and edges the Sound allowing hikers views of brown pelicans and egrets. The trail incorporates boardwalk planks due to the aquatic nature of the trail.

The original trail boardwalks required repair or replacement due to humidity and usage to ensure continued safety for outdoor recreation. Furthermore, old picnic tables and trail signs also required repair or replacement as well as the addition of benches to rest at the fishing overlook. The trail signs were cleansed of alga, fungus, and lichen growth. On November 8th, the new picnic tables and benches were installed. Other activities included repairing railings, raking leaves, trimming branches, and mowing grass to control obstructive vegetation. Volunteers also collected trash along the trail and installed trail counters to assess trail usage. The environmental restoration activities performed over these two events achieved the goal of sustainable maintenance of the Grace Brown Nature Trail, keeping it safe and enjoyable for recreation.

This project addressed several aspects of restoration including increasing capacity for outdoor recreation particularly on military installations, volunteerism, natural resource awareness, wildlife conservation, and preservation practices. Protecting the aquatic resources in the Santa Rosa Sound provides vital nesting, breeding, and feeding habitats for numerous species and helps to filter pollutants out of the water. Maintaining this trail also keeps it safe and enjoyable for the wider base population so that the community can continue utilizing Grace Brown Nature trail for physical fitness, wildlife viewing, fishing, water access, and mental health.

Project Output Totals:

- **18** volunteers
- **2** miles of trail restored or maintained
- **500** pounds of trash collected and disposed
- **7** installation structures and facilities built, rebuilt, or repaired
- **2** cultural resources or historical properties affected

Contact: Lorraine Ketzler, USFWS Liaison to Hurlburt Field, FL | 850-883-1190 | lorraine_p_ketzler@fws.gov



Commandos are Great Volunteers – Grace Brown Nature Trail Boardwalk Repairs for National Public Lands Day

1 SOCES/CEIE organized the project, improving trail access for outdoor recreation.

The Grace Brown Nature Trail on Hurlburt Field is located behind the Soundside Club and provides scenic views of Santa Rosa Sound as well as excellent wildlife watching opportunities and a fun hiking experience.



Hard work and
volunteering pay off!
Way to go Wingmen!



Volunteers
replaced
rotten/broken
boards, trimmed
vegetation along
the trail, and
picked up
numerous bags
of garbage!



17 volunteers represented
the 1 SOCES, 8 SOS, 28 IS,
919 SOW, 39 IOS, 801
SOAMXS, 1 SOMXS, and
the 479 FTG/FMF (out of
Pensacola!)



Any Time...Any Place

United States Army



Fort Belvoir | Virginia

Stabilization of Potomac View Trail and Sign Replacement for Cedar Grove Cemetery

Project Dates: May 17th, 2020; September 8th, 2020; February 9th, 2021; February 16th, 2021

Project Summary: Fort Belvoir *Directorate of Public Works Environmental Division (DPWED)* preserves cultural and historical resources for future research and public education. In 2020, they hosted an event on The Belvoir Manor site trails conducting trail maintenance and environmental restoration activities with their volunteers. Overall, the project assisted in the preservation of important cultural resources, improved trail safety, and increased habitat and food resources for migratory birds and pollinators. The Belvoir Manor site is the location of the Fairfax family's original estate. The main house – called Belvoir Manor or Belvoir Mansion burned in 1783 and was destroyed during the War of 1812. The nationally registered historic site remains a significant cultural resource to the region and now supports a popular trail system used by Fort Belvoir residents. The original trail was constructed using an

NPLD grant in the 1990s and follows the cliff side closely, showcasing beautiful views of the Potomac River. Over time the heavy foot traffic has exacerbated the erosion of the cliffs and riparian zones. The erosion experienced at the site is threatening the remaining Belvoir Manor ruins. A portion of the trail has been deemed unsafe and had to be closed and then rerouted. Furthermore, temporary fencing and other signage were regularly removed by trail users who continued to hike on the closed trail. If allowed to continue, the resource would have continued to suffer severe degradation.



Volunteers primarily consisted of Department of Public Works employees and soldiers from the Fort Belvoir Community Hospital. DPW employees were procured through internal volunteer requests. There were five different event days overall ranging from planting native trees and wildflowers and repairing the Manor site trail to virtual educational engagements. To educate the public on the purpose of the project, a month-long Facebook campaign was initiated. Videos featuring natural and cultural resources specialists discussing various aspects of the project were filmed and posted to Facebook. Each week was themed to match the video topic and activities were shared to reinforce the lessons discussed. Overall, both volunteer groups reported having a positive experience and were educated about the project by on-site Environmental Specialists. Both groups also reported enjoying the opportunity to be outside and work with a team as that has been less possible given the current public health conditions. Volunteers were excited to leave a lasting impact on the trail system that would benefit users, wildlife, and cultural resources. The volunteers helped to

Project Output Totals:

- **8 volunteers**
- **99 square feet of land restored or maintained**
- **60 native plants added**
- **1 installation structures and facilities built, rebuilt, or repaired**
- **5 cultural resources or historical properties affected**

stabilize the erosion rate of the unstable trail section and cliffs while maximizing and increasing the available pollinator and migratory bird habitat.

Due to the funds provided by the award, Fort Belvoir was able to permanently close the eroding trail section expanding important habitats for migratory birds, pollinators, and holly trees. The planted holly trees help to stabilize the eroding trail edge and block the old trail while also providing habitat and food resources for migratory birds. By reducing the rate of erosion at the site, the nearby Belvoir ruins can be sustainably preserved. Additionally, they were able to install a new pollinator garden at the trailhead which increases the available wildflower and pollinator habitat on Fort Belvoir lands. Trail signs were also replaced or refurbished. These funds allowed them to achieve their strategic goals of providing safe recreational opportunities to the public, protecting significant cultural resources, and increasing pollinator habitat across the installation.

Contact: Monica Mundrick, Wildlife Specialist | 703-806-0048 | mmundrick@scf-llc.com

Army Natural Resources Program, O`ahu Kahanahaiki Ko`oko`olau Seed Orchard

Project Dates: September 26th, 2019; September 28th, 2019; November 7th, 2019

Project Summary: Army Natural Resources Program hosted an event focusing on the removal of invasive plant species and native habitat restoration.

The Army Natural Resources Program hosted volunteer events over three days, including a school group from Nanakuli High School. On September 26th, the volunteers participated in an orientation to the Schofield Barracks area, a rare plant nursery, a seed lab, and seed orchard. Volunteers then constructed a trellis for endangered flora such as the *gray O`ahu chewstick* and participated in their planting. The next volunteer day consisted of interpretive hikes along the Kahanahaiki trail sharing natural and cultural resource information about specific plant and animal resources. Afterwards, volunteers participated in a weed control project at the Seed Orchard. On the final event day, November 7th, students from Nanakuli High School participated in an outplanting project, where they planted endemic vegetation three meters from one another and were able to hike along the trail and learn about seed orchard techniques.

Project Output Totals:

- **35 volunteers**
- **37,631 square feet of land restored or maintained**
- **1,378 native plants added**
- **14,696 square feet of invasive vegetation removed**

The stabilization of endangered plants on Oahu requires native Hawaiian habitat. In addition, the Army in Hawaii specifically requires 50% or less non-native vegetation in their natural resource management units. One of the significant challenges in the Army achieving that goal is having adequate seed stock to restore native habitat. Due to the dominance of invasive species in Hawaiian forests, developing a seed source to grow plants for outplanting can greatly increase the number of native plants. Volunteers were active supporters of this process, working with two common native species, *Ko`oko`olau* (*Bidens torta*) and *Carex wahuensis*, along with one endangered species, *gray O`ahu chewstick*. Through this award and volunteer support, the Army Natural Resources Program was able to plant an entire new Seed Orchard. Volunteers also helped to improve an existing Seed Orchard at Schofield Barracks, an alternative project they added. Besides, removing invasive weeds from the new Kahanahaiki Ko`oko`olau Seed Orchard site was essential in being able to utilize the area for native vegetation, which allowed their program to meet invasive species removal goals along with the increasing potential for seed production of Ko`oko`olau for restoration.

Ko`oko`olau is a culturally significant plant, traditionally used for purposes such as making tea. In the absence of native forests, access to this resource has been limited for the public. Restoration of the forest using this species not only supports program restoration goals, but it gives community members and cultural groups who volunteer with them regularly a chance to view, learn about, and even harvest the plant for their use, perpetuating its traditional uses. Caring for upland native forests—in the Hawaiian tradition known as the wao `Akua (the realm of the gods)— supports healthy lowland forests and nearshore areas where their communities reside. It prevents sedimentation from impacting estuarine and marine systems, along with the biota within them, which communities rely on for subsistence and recreation. By extending the project to youth, they were able to increase their awareness and knowledge of the threats to the local and regional environment. Many of the youth participants were of native Hawaiian ancestry. The Seed Orchard allows them to connect with their cultural history through a culturally significant restoration project and by working within traditional ahupua`a (land divisions) in remote areas. Caring for areas like Kahanahaiki and developing a seed source to do so is critical to ensuring healthy forests in an island system that supports nearly a million residents.



“The Kahanahaiki Seed Orchard was one of our most impactful projects to date because of the lasting, multi-generational impacts the work will have.” – Kimberly Welch

Seed stock for restoration purposes is one of the greatest challenges in Hawaiian forest conservation due to the unique genetic communities and morphological characteristics of plants found across the Hawaiian archipelago. By preparing a field "seed orchard," to improve the habitat directly by removing invasive plants and outplanting native *Ko'oko'olau*, they are also growing the next generation of plants (i.e., seeds) which will be used to restore other areas throughout Kahanahaiki (Makua Military Reservation). Kahanahaiki is considered a traditional Hawaiian land division (ahupua'a), where resources are managed in a contiguous region from upland to seaward. Supporting the native habitat of Kahanahaiki and bringing volunteers to this special area in the Wai'anae Mountains allows the public to see these traditional land divisions. Protecting these upland native forests also provides important habitat for endangered species that the Army conserves in the effort to fulfill their mission in Hawai'i. Also, maintaining a healthy native forest with a diverse community of plants--one that is not overrun by invasive species as is the case for most Hawaiian forests--supports freshwater resources that are critical to the island community and reduces the number of wildfires.

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United States Air/Army National Guard



Arizona Army National Guard Mesa Readiness Center NPLD 2019 Project

Project Date: November 9th, 2020; November 10th, 2020

Project Summary: Arizona Army National Guard created an integrated educational and environmental project, engaging community members through a historical lens and performing environmental restoration projects in the surrounding area.

The two project days focused on creating several pollinator gardens and placing signs educating the public about the wildlife and history of the area. Pollinator gardens support and maintain pollinators by supplying food in the form of pollen and nectar that will ensure that important animals and plants stay in the area to maintain garden productivity and growth. An ADA-accessible sidewalk was also created leading to a small historical area near the project site. Previously the path was rocky and sandy, now it is accessible and safe. Benches were also installed to create sitting areas for people walking around the center.

Volunteers were a combination of government employees and family members. Over the two event days, volunteers also learned about the local and environmental history of the area. Those involved in the project came away with increased appreciation, knowledge, and nature-connectedness of the area and for the base.

Project Output Totals:

- **50** volunteers
- **2,000** square feet of land restored or maintained
- **200** native plants added
- **14,696** square feet of invasive vegetation removed
- **1** mile of trail building or maintenance
- **10** installation structures and facilities built, rebuilt, or repaired
- **1** cultural resource or historical properties affected

Contact: Dorenda Coleman, Land Disposition Manager | 602-629-4261 | dorenda.coleman@fmo.azdema.gov

Texas Military Department Camp Mabry Public Education and Outreach Project

Project Dates: September 28th, 2019; October 11th, 2019; October 18th, 2019; October 25th, 2019; November 5th, 2019; November 12th, 2019; November 19th, 2019; December 1st, 2019

Project Summary: Texas Military Department conducted a public education and outreach campaign on environmental conservation to improve the recreational activities at Camp Mabry for both military personnel and civilians.

The Texas Military Department utilized numerous volunteer groups to help complete their project while also communicating educational topics. The volunteers included local Scout troops, community members, Tree Folks, and military employees. On the first event day, the Tree Folk volunteers planted 1,500 native riparian saplings and plugs at Camp Mabry and removed the invasive species that had overtaken the landscape. The other event days included the Scout troops, military employees, and community members where they installed several wood duck houses and repaired a heavily trafficked trail. Furthermore, volunteers helped to build and install new turtle island habitats and participated in an interpretative and educational native tree trail walk where they learned how to identify endemic and invasive tree species.

In November, the volunteers returned to learn about a historic firing range and performed a trail maintenance project. Then to provide nesting for Chimney Swifts, a Purple Martin House was constructed and installed along with a couple of bee frames. The bee frames were used as an educational component to teach about native bee identification and how beneficial they are to the local and global environment. Lastly, 8 bat houses were constructed, which are particularly helpful in providing alternative roosting habitat for bats excluded from homes, and provides a safe environment for bats while protecting plant species from insects and pests. The Texas Military Department concluded with a trail-head repair project where they installed new steps, a creek crossing, a concrete picnic table, and had participants do another native tree trail walk and identify native and non-native tree species. Throughout the project, numerous educational signs were installed around the installation trails to educate recreationists on the newly built structures and planted trees. These newly installed signs and structures will improve the recreational activities at the site for both military and the public as well as educating the population on the importance of wildlife and native plants for a healthy environment.

The project improved the natural and cultural resources of the area through planting riparian stabilizing trees to improve overall riparian zone health, improve wildlife habitat, and nesting or roosting areas through the construction of bee frames, purple martin houses and bat houses. The planting of native species and the removal of invasive species also improves and enhances the natural resources of the site and protects the historical firing range.

Project Output Totals:

- **60 volunteers**
- **1,000 square feet of land restored or maintained**
- **2,600 native plants added**
- **25 square feet of invasive vegetation removed**
- **2 miles of trail building or maintenance**
- **3 miles of waterway restored or maintained**
- **1 installation structures and facilities built, rebuilt, or repaired**
- **1 cultural resources or historical properties affected**

Contact: Jacqueline Jackson, Grant Coordinator | 512-782-5408 | Jacqueline.Jackson@military.texas.gov

Camp Ripley, Minnesota Army National Guard Natural Resource Management Project: National Public Lands Day

Project Dates: September 20th, 2019

Project Summary: Camp Ripley, Minnesota Army National Guard located in Morrison County, Minnesota hosted an event dedicated towards public outreach, environmental restoration, and collaborating with American Indian tribes to promote natural resource conservation and cultural appreciation.

This grant supported the ongoing development of a phased native prairie reconstruction on approximately 17 acres at the Minnesota National Guard's MNNG Camp Ripley Training Center. The site is situated within the northern-most region of the Anoka Sandplain ecological subsection; bounded on the west by a 62-acre, 10-megawatt solar power plant seeded with perennial native vegetation that provides a foraging habitat beneficial to game birds, songbirds, and pollinators. The perennial foliage reduces stormwater runoff and erosion at the site. At the request of tribal members and schools, this area will also be used to collect sage for ceremonial purposes. The phased native prairie reconstruction site was organized through inspiration from the Mille Lacs Assistant Tribal Preservation Officer, combining an outreach event between MNNG and indigenous tribal communities to help increase understanding of the sacred roles of native plants in traditional Anishinaabe culture.

Project Output Totals:

- **50 volunteers**
- **740,520 square feet of land restored or maintained**
- **4,476 native plants added**

Students from several communities throughout the Mille Lacs Band of Ojibwe and Leech Lake Band of Ojibwe participated in 'Planting For the Future'. Camp Ripley's 'Planting For the Future' event provided an opportunity for mutually beneficial collaboration that promoted natural resource conservation in tandem with the cultural appreciation of the indigenous discussing the roles of conservation and preservation and how these concepts can affect indigenous tribes. The Mille Lacs Assistant Tribal Preservation Officer began the event with a traditional prayer and blessing. All participants were invited to a traditional drumming circle and were able to learn about its importance in Native American ceremonies. Students and soldiers learned about the roles sacred plants play in the Anishinaabe culture fostering cross-cultural learning. Participating in the physical restoration of native plants to the landscape through planting was a meaningful endeavor that stretched well beyond ecological value. A white paper was also developed to assist in communicating background information for the event and was shared with volunteers. This event was a first of its kind and a learning opportunity regarding traditional indigenous uses of plants.

This event advanced and promoted outreach with interested stakeholders and ensured access to natural and cultural resources while targeting the enhancement of existing grasslands with culturally significant native plants. The event also helped promote diversity and inclusion through partnering with the native tribes of the Ojibwe. Students were able to connect with service members and learn about opportunities with the Minnesota Army National Guard. Three interpretive signs at the reconstruction site describe the cultural significance of native prairie plants to the Ojibwe people and the ecological significance of Minnesota's native prairie biome. The sign panels include photographs of grasses and forbs planted at the site, a list of the plants' common name, scientific name, and Ojibwe name. The signs will now engage service members, their families, and visitors, and inform them of the important benefits of a healthy functioning natural landscape while utilizing their recreational site.

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United States Navy



DoD/MCIEast/MCB Camp Lejeune/G-F/EMD/ECON Pollocks Point Wildlife Viewing Area Revitalization

Project Dates: December 12th, 2019

Project Summary: Camp Lejeune located in North Carolina hosted volunteers to perform critical habitat and natural disaster restoration in the Pollocks Point Wildlife Viewing Area to prove the public with an enjoyable place to learn and recreate.

Camp Lejeune engaged volunteers in an integrated project approach that involved natural resource management and cultural or historical preservation. Partnering with the Single Marines Program to recruit on-installation volunteers for the project, they were able to amass marines from various military units for their participation. Volunteers helped to remove old and damaged split rail fencing and created and installed new fence posts to erect new fencing. Volunteers learned about native plants and then removed weeds and cleared brush from around the native plants. Two interpretive natural resources signs were installed focusing on wildlife viewing and songbirds. Damaged bluebird houses also needed to be replaced, so volunteers installed the new houses and then removed trash and litter from the area.

Project Output Totals:

- **18 volunteers**
- **40,974 square feet of land restored or maintained**
- **200 pounds of trash collected and disposed**
- **2 installation structures and facilities built, rebuilt, or repaired**
- **2 cultural resources or historical properties affected**

The volunteers benefited from this experience by also learning through Camp Lejeune's educational component that this site offers an opportunity to view wildlife, migratory birds, native plants, and fish. Several of them also learned the proper way to erect fence posts, and some carpentry skills building sign frames. Volunteers also learned about the historical significance of the site, assisting to preserve memorials dedicated to the first African Americans to serve in the United States Marine Corps, soldiers who have fallen in service, and a memorial to honor those who died in the 1983 Beirut barracks bombings, among others. Maintaining this landscape protects cultural monuments which provide insight into the historical significance of this area.

"Many volunteers were unfamiliar with the existence of this site...Although it was cold that day, the volunteers worked well as a team and enjoyed spending the day outside working towards the goal of improving this site. We have received multiple positive comments from Pollock's Point visitors that they like the improvements and they are glad we are continuing to maintain the site." – Emily Gaydos

The Pollock's Point Wildlife Viewing Area is a popular site for the public to enjoy wildlife watching, fishing, and natural and cultural resource education. Multiple hurricanes have damaged the area, and this project ultimately allowed for the improvement and restoration of the wildlife viewing area. Their goal was to restore and continue to improve the Wildlife Viewing Area to provide the public with an enjoyable place to learn and recreate. This project allowed them to accomplish the goal of improving wildlife habitat which fits into their broader goal of natural resource education, cultural resource protection and education and maintaining natural spaces. New educational

signs will inform visitors of the importance of pollinators, migratory birds, native plants, and marsh/wetland habitats.

The community impact from volunteer participation is that community members have a restored outdoor space to enjoy the natural and historical resources in the area. Native plants were preserved by removing weeds and trimming shrubs and installing fencing. Habitat was created and improved for migratory birds and other wildlife. The installation is a phenomenal place to experience natural resources, but due to the limited access allowed to the surrounding community, many people do not have the opportunity to enjoy it. The Wildlife Viewing Area is a place available and open to the public and offers an opportunity for outdoor recreation without the limitations of installation access.

Contact: Emily Gaydos, Wildlife Biologist | 910-451-7235| emily.gaydos@usmc.mil

Naval Weapons Station Seal Beach NAVWPNSTA Seal Beach – NPLD 2019 – Native Habitat Restoration

Project Dates: March 23rd, 2020; March 24th, 2020; March 25th, 2020; March 26th, 2020; March 27th, 2020

Project Summary: Naval Weapons Station Seal Beach located in Seal Beach, California hosted volunteers to restore the native vegetation of the upper saltmarsh habitat.

The NPLD event scheduled was not able to be completed successfully as designed, therefore, NEEF and the project manager had to be agile and come up with a flexible approach to complete the project while also completing the goals designed in the award. The first planned date for a volunteer event was originally scheduled for February 22, 2020 but was postponed due to the weather. Then the postponement date of March 21, 2020 was cancelled due to the pandemic and the lockdown orders issued. Non-essential personnel were not permitted on the installation at that time.

Project Output Totals:

- **2 volunteers**
- **200 native plants added**

The project manager was then allowed to have participation from environmental experts, specifically from an ecologist and a wildlife refuge manager. They both helped to plant a couple hundred of the native plants in the week following. The native vegetation at the site reduces the biomass of invasive species. This year's project included the removal of invasive plants, preparing the land for restoration, and planting native plants. These upland restoration areas provide habitat and shelter for numerous species of migratory and resident bird species, including the federally endangered light-footed Ridgway's rail and California state-endangered Belding's Savannah Sparrow. These areas also provide an important buffer between wetland habitat and agricultural lands.

This project supported the implementation of shoreline and dune stabilization and conservation/habitat restoration along the coastal region and saltmarsh habitat. Impacts from storms and military training have resulted in dune destabilization, erosion, wildlife habitat loss, and overall degradation. This project helped to restore the dunes by planting a native variety of vegetation on the installation's identified marsh restoration sites. The vegetation's network of underground root systems will help to bind and stabilize the sand, minimizing impacts from storm and training erosion. Planting a variety of native plants helps to create a more natural saltmarsh and upland habitat increases biodiversity at the site and supports pollinator and endangered species protection efforts.

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NAVFAC Hawaii Loko Paaiau Fishpond Restoration

Project Dates: September 28th, 2019; August 15th, 2020

Project Summary: NAVFAC Hawaii located in Hickam Field, Hawaii hosted an educational program and restoration project for the Loko Paaiau Fishpond to identify and remove invasive plant species around a traditional Hawaiian structure. The Hawaiian structure also had a stone foundation constructed for its future preservation.

Volunteers were recruited by advertising in the Navy (MWR) bulletin and announced during community meetings including the Aiea Neighborhood Board and Aiea Community Association. The volunteers were recruited using social media platforms, community meetings and Hawaiian civic club meetings. Volunteers were educated by the native Hawaiian master hale builder and native Hawaiian cultural practitioners. Homeschooled children from the adjacent Navy housing area participated in the activities as part of their curriculum. By participating in this event, volunteers became involved in local Hawaiian culture and strengthened the relationship between the Navy and the native Hawaiian community.

Volunteers on NPLD cleared invasive vegetation from the fishpond and then planted native vegetation which will also be used for traditional Hawaiian health and healing practices. Then garbage and litter that was floating in the fishpond and located around the fishpond were removed and disposed of. Volunteers in August then cleared the invasive vegetation from the hale or traditional Hawaiian structure, levelled the ground surface, helped to construct the hale, and then installed lava pavers for the hale floor. The project participants successfully installed the floor for the hale. The hale will provide a place for veterans and community members to meet and learn about traditional Hawaiian cultural practices and to host educational programming. The local community, including native Hawaiian organizations (NHOs), benefited by working in collaboration with the Navy to preserve and protect important cultural resources. Community groups associated with the fishpond restoration effort educated the surrounding neighbors about protecting the environment and the fishpond. This will improve relationships between the Navy and NHOs for future consultations.

The Loko Paaiau restoration project had a positive impact on cultural resources. Loko Paaiau is an ancient Hawaiian fishpond that is over 400 years old. It is one of the three remaining fishponds around Pearl Harbor that has survived. Over 22 fishponds once existed at Pearl Harbor, but development and neglect have reduced the number of fishponds to three. Pearl Harbor, traditionally known as Puuloa, was once the main settlement on Oahu, and residence to many Alii, or chiefs. Many of the native Hawaiians who participate in the Loko Paaiau restoration are descendants of royalty who once resided in Puuloa. The NPLD project at Loko Paaiau is part of the restoration of this fishpond. The Navy and community must maintain and restore this fishpond before it deteriorates. The NPLD event and August event included removing invasive plants, planting native vegetation, and constructing the hale floor. The goal of this project was to restore the fishpond to its original configuration and harvest fish. The hale will also be used as an educational center for local and base schools to learn about traditional Hawaiian aquacultural practices. Removing garbage from the fishpond is also vital to the restoration of the environment. Monthly maintenance also involves removing garbage that floats into the fishpond from nearby streams. This garbage is removed to ensure that the local birds and fish are not impacted. These activities will ensure that the main wall and sluice are protected, and future activities will include restoring the wall to its original condition.

Project Output Totals:

- **60 volunteers**
- **500 square feet of land restored or maintained**
- **20 native plants added**
- **500 square feet of invasive vegetation removed**
- **400 pounds of trash collected and disposed**
- **1 cultural resources or historical properties affected**

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Naval Support Activity Hampton Roads

Pollinator Garden Enhancement and Shoreline Oyster Gardening/Habitat Restoration

Project Dates: November 15th, 2019; November 22nd, 2019; July 10th, 2020; July 11th, 2020; July 16th, 2020; July 17th, 2020

Project Summary: Public Works Department NSA Hampton Roads located in Norfolk, Virginia updated their existing pollinator garden to plant native pollinator species, mulch, and build upon the garden at Portsmouth Annex. This will ensure a healthy and vibrant habitat for pollinators and community members. Volunteers were able to plant native vegetation and establish oyster gardening practices to include oyster castles to positively influence the Lafayette River ecosystem, a target of the Chesapeake Bay Program. This will help with the attempt to revitalize the overgrown pollinator garden and help to stabilize an eroding shoreline while providing suitable habitat for oysters and other marine life along the shore.

Volunteers set out to clean up the pollinator garden, removing old debris and accumulated trash. The project began with site preparation and clean-up, removing the dead vegetation and outside barrier and installing a new landscape timber barrier so that the newly planted plants can have a healthy environment. Gear for the cleanup and planting was provided. After the cleanup, on the next project date, native plants were planted in the area and mulch was spread around the plants. In July, volunteers helped to spread crushed clams' shells around the perimeter of the pollinator garden as a walking trail and connected an existing trail to increase the walkable perimeter of the trail at the installation. Then the oyster castles were installed in the Lafayette River. The Lafayette River is one of the most severely impaired rivers in the country. One of the goals is to help restore the health of the river. This project will improve the general water quality in the river through the oyster's filtration processes and will provide habitat for pollinator species.

Project Output Totals:

- **32 volunteers**
- **500 square feet of land restored or maintained**
- **80 native plants added**
- **150 pounds of trash collected and disposed**
- **2 installation structures and facilities built, rebuilt, or repaired**



erosion in the future.

The projects had a positive impact on the natural resources of the DoD sites through revitalizing important pollinator habitats for species that are on the decline as well as providing a place for community engagement and recreation for guests and military stewards of the land. The pollinator garden provides the local environment with a "green space" for local installation personnel and visitors to go during their time on the installation and for native vegetation and important pollinator species. The oyster castle reef provides both a benefit to the installation through protecting the shoreline and providing habitat for oysters and other marine life along the shoreline of the Lafayette River. At the Lafayette River Annex, the project helped to restore areas of the shoreline that continue to erode and wash away during storm events. Following these efforts, the shoreline will be better stabilized to resist

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