



# Department of Defense Legacy Resource Management Program

PROJECT 15-086

## **National Public Lands Day 2015**

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**DEPARTMENT OF DEFENSE  
LEGACY RESOURCE MANAGEMENT PROGRAM (15-086)**

**National Public Lands Day 2015**

On September 26, 2015, approximately 200,000 volunteers participated at 2,520 National Public Lands Day (NPLD) sites to improve parks and other public lands in all 50 states and the District of Columbia. NPLD volunteers contributed an estimated \$18.5 million in public land improvements by removing 500 tons of trash; collecting 25,000 pounds of invasive vegetation; building and maintaining 1,600 miles of trails; and planting 125,000 trees, shrubs and other native plants. Many NPLD events included an environmental education component to teach volunteers about land stewardship. In 2015, NPLD continued to focus on promoting the health benefits of outdoor recreation. Sites were encouraged to integrate recreational activities for adults and youth into their events, such as hiking, birding, biking and fishing.

The Department of Defense provides funds to the National Environmental Education Foundation (NEEF) for National Public Lands Day projects on military lands open to the public for recreation. Since 1999, National Public Lands Day has received \$2,406,585.76 through the Legacy Resource Management Program (Legacy). In 2015, a total of \$160,000 was distributed to installations for materials and supplies. The Legacy funds were used to enhance Department of Defense (DoD) lands through various cultural and natural resource improvement projects. Participating in NPLD provides the natural and cultural resource managers the means and labor to complete small installation-specific projects that may not otherwise get done due to budget or staffing limitations. These projects improve habitat and biodiversity for common and rare species alike, often reducing the need for intense management of these species.

The National Environmental Education Foundation received 35 applications for Legacy awards of up to \$6,500 each for 2015 NPLD projects. In September, NEEF notified 30 sites that they were selected to receive a Legacy Resource Management Program Award. NEEF awarded Legacy funds to sites by sending payment directly 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 eight Air Force, eight Army, eight Army/Air National Guard, one Marine Corps and five Navy sites.

Over 1,197 volunteers took part in various natural and cultural resource improvement activities that were offered at the 30 funded Legacy installations. Many Legacy sites organized work projects to improve habitat for pollinator species including bees, birds, bats and insects. Other natural resource activities performed by volunteers included removing invasive plants, restoring rivers, enhancing dunes, constructing trails and planting native trees and wildflowers. The cultural resource activities included preserving burial sites, repairing historic structures and installing educational signage.

In addition to receiving funds, participating DoD installations received 2015 Federal Fee Free Coupons to distribute to their volunteers. National Public Lands Day partners with five federal land management agencies to provide volunteers who participate in at Bureau of Land Management, National Park Service, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service or USDA Forest Service lands may receive a fee-free coupon. While DoD installations technically, are not open to the public, NPLD chose to honor the agency's continued partnership through offering this special incentive.

# Legacy Sites 2015

<b><u>United States Air Force</u></b>	<b><u>Amount Awarded</u></b>
Beale Air Force Base   California	\$1,394.49
Bellows Air Force Station   Hawaii	\$6,500.00
Bellows Air Force Station   Hawaii	\$3,250.00
Eglin Air Force Base   Florida	\$6,380.00
Joint Base San Antonio - Fort Sam Houston   Texas	\$6,500.00
Malmstrom Air Force Base   Montana	\$6,500.00
Shaw Air Force Base   South Carolina	\$6,500.00
Tyndall Air Force Base   Florida	\$5,655.76
<b><u>United States Army</u></b>	
63rd Regional Support Command   California	\$5,230.00
Fort A.P. Hill   Virginia	\$4,050.00
Fort Bragg   North Carolina	\$5,068.59
Joint Base Lewis-McChord   Washington	\$6,500.00
Redstone Arsenal   Alabama	\$6,473.00
Schofield Barracks   Hawaii	\$6,500.00
Umatilla Army Depot   Oregon	\$6,500.00
White Sands Missile Range   New Mexico	\$6,400.00
<b><u>United States Army/Air National Guard</u></b>	
Camp McCain Training Center   Mississippi	\$3,496.04
Camp Shelby   Mississippi	\$3,227.35
Camp Shelby Joint Forces Training Site   Mississippi	\$4,917.05
Florence Military Installation   Arizona	\$6,499.67
Fort Custer Training Center   Michigan	\$6,500.00
Fort Lupton Readiness Center   Colorado	\$6,493.00
McCrary Training Center   South Carolina	\$4,439.42
Silverbell Army Helipoint   Arizona	\$6,411.19

**United State Marine Corps**

Marine Corps Air Ground Combat Center | California \$6,447.71

**United States Navy**

Joint Base Pearl Harbor-Hickam | Hawaii \$5,855.70

Naval Air Station Oceana Dam Neck Annex | Virginia \$6,360.00

Naval Support Activity Hampton Roads | Virginia \$2,497.00

Naval Support Activity Monterey | California \$954.03

Naval Weapons Station Seal Beach | California \$6,500.00

## United States Air Force



### Beale Air Force Base | California Natural Resource Project: Creekside Habitat Upgrade

**Project Date:** September 26, 2015

**Project Summary:** Volunteers worked to restore the riparian habitat of Beale Air Force Base's Dry Creek. Volunteers conducted maintenance on approximately three miles of habitat by picking up litter, planting trees, fixing broken and rodent-damaged irrigation systems, and removing weeds from the bases of the trees. Tree cages and tree guards were also installed to reduce future rodent and deer damage.

Civilian, military, and family members living in the housing community adjacent to the irrigation system took part in the restoration project. These volunteers learned about the vast destruction of California's riparian habitats and the subsequent local and regional impacts of these losses. Volunteers also learned how their contributions to the cleanup and restoration of Dry Creek will positively affect the downstream community, especially in aiding water retention during the California drought.



**Contact:** Amber Groll, Project Coordinator | 530-624-9567

### Bellows Air Force Station | Hawaii Cultural and Natural Resource Project: "Hopu One Kea" (Capture the Sand)

#### Pollinator Project

**Project Date:** September 10-28, 2015



**Project Summary:** Bellows Air Force Station (BAFS) was one of the first locations settled by Polynesians in Hawaii. Unfortunately, the sandy beaches of BAFS are receding. Northern beach sections have already disappeared and a U.S. Geological Survey reports losses of up to one foot per year for other parts of the BAFS shoreline. This year, the BAFS Coastal Restoration Volunteer Program executed multiple projects to out-plant approximately 6,000 feet of shoreline with 2,500 native Hawaiian plants.

Over the course of several weeks, volunteers cut trees, assembled irrigation lines, spread mulch, set log perimeter, and planted and watered plants. These native plantings will capture new sand to build the dune ecosystem. Out-planted dunes mitigate beach erosion, increase pollinator species, protect sensitive native Hawaiian burial sites, and improve the recreational experience. Volunteers learned about Hawaiian cultural burial practices, native and invasive plants, and the sand dune ecosystem. The dune restoration project coordinated a

diverse group of over 100 volunteers who made this project a great success. Participating groups included: local schools, afterschool programs, and universities; Air Force Civil Engineering Center; local AF Reserve Units; Naval Facilities Engineering Command Hawaii; and Bellows AFS.

**Contact:** Craig Gorsuch, Environmental Program Manager | 808-927-1867

## **Bellows Air Force Station | Hawaii** **Natural and Cultural Resource Project: Puha Stream Riparian Restoration**

### **Pollinator Project**

**Project Date:** December 5, 2015

**Project Summary:** The Puha stream forms the southern border of Bellows Air Force Station (BAFS). Much of this historical riparian zone and wetlands were lost with the completion of the Army Corps Discharge Channelization project in the early 1940s. On December 5<sup>th</sup>, volunteers worked to restore approximately 5,430 square feet of ecologically significant habitat along Puha stream. Wetland restoration protects native Hawaiian birds from predators and provide better wetland habitat for the birds to forage and nest. Volunteers from the Youth Challenge Academy, University of Hawaii, local elementary schools, native Hawaiian organizations, and other federal DoD agencies removed 200 pounds of invasive vegetation; planted native Hawaiian pollinator plants, shrubs, and trees; and installed temporary irrigation to establish the native plants. The out-planted riparian zone will provide stream bank stability, soil conservation, increased native biodiversity, shade, and an improved habitat for native Hawaiian water fowl species for roosting, foraging, and breeding.

Volunteers learned about Hawaiian culture, the history of the Waimanalo area, propagation and nursery management, natural resource field work, and invasive species identification and eradication. Volunteers discussed how their project benefits the broader Waimanalo community, University of Hawaii students, military land users, and public visitors visiting and camping at Bellows.

**Contact:** Kristine Barker, Cultural Resources Specialist | 808-672-1264

## **Eglin Air Force Base | Florida** **Natural Resource Project: Erosion Rehabilitation Area Planting & Pollinator Education**

### **Pollinator Project**

**Project Date:** September 26 and November 10-12, 2015

**Project Summary:** Eglin Air Force Base's staff and volunteers built a small pollinator display garden and educational sign in front of the Eglin Natural Resources (NR) building. Volunteers removed overgrowth from the permit office garden and planted 160 plants. The garden and sign at the front of the office will be seen by over 25,000 visitors annually – those coming to renew annual recreational passes, plus a myriad of ecological conference participants, employees, school children, and Air Force base personnel and contractors.



In addition to the enhancement of the NR Permit office and garden, volunteers also planted 81 trees, 661 plants, and eight pounds of wildflower seed at a formerly rehabilitated erosion control site on base. They removed about 300 invasive sand pine saplings from the area and constructed four, three-chamber bat boxes. By planting at a former erosion control site on the Eglin reservation,



the project immediately contributes to species diversity and pollinator habitat improvement. For example, the stream is home to the Okaloosa darter, an indicator species present only in six streams, 90 percent of which are contained within Eglin AFB. The Okaloosa darter was originally listed in 1973 as an endangered species. Due to habitat improvements such as these, the species has now been downgraded from endangered to threatened.

**Contact:** Patricia Williams, Research Associate II, CSU | 850-883-1192

## **Joint Base San Antonio - Fort Sam Houston | Texas** **Natural Resource Project: Green Infrastructure for Flood Control, Groundwater Recharge, and Pollinator Habitat Regeneration**

### **Pollinator Project**

**Project Date:** September 26 and November 6, 2015



**Project Summary:** Joint Base San Antonio – Fort Sam Houston is in the dense urban core of San Antonio, Texas. As with most urban centers, there is a lack of native plants available to pollinators and an overabundance of runoff from impervious surfaces. The purpose of this NPLD project was to catch and utilize stormwater runoff as powered irrigation to green an underutilized park, to regenerate pollinator habitat in an urban landscape, and to improve soil health. This was accomplished by installing native soil berms that slope less than one percent off contour and pull the runoff slowly throughout the park and into the ground as deep soaking irrigation. Once the berms were installed, 800 native plants, several million seeds, and 11 trees were also planted. Volunteers removed 400 pounds of trash and 20 pounds of invasive vegetation. Erosion, sedimentation, and downstream flooding are reduced by slowing, spreading, and sinking runoff into the landscape.

Volunteers learned about pollinators and simple ancient techniques that turn damaging floodwaters into beneficial groundwater supplies. Project Manager, Bryan Hummel, commented “Even the young children could see the issues with the way we typically develop the landscape to rush the water away as rapidly as possible. When we pretended we were a raindrop falling in the parking lot, they observed that most of the runoff was prevented from reaching the plants by concrete curbs and a design that flushes water right past landscape trees toward concrete lined drainage ditches. I love seeing the young brains making new connections and hopefully learning new concepts.”

**Contact:** Bryan Hummel, Pollution Prevention and Aquifer Recharge Specialist | 210-218-7915

## **Malmstrom Air Force Base | Montana** **Natural Resource Project: Distinguished Visitors' Pollinator Garden**

### **Pollinator Project**

**Project Date:** September 25-26, 2015

**Project Summary:** Malmstrom Air Force Base is located on a landscape with a large number of xeriscape rock beds and some raised beds. The NPLD project converted the installation’s rock beds and empty raised beds to thriving pollinator gardens, while simultaneously reducing the amount of herbicide needed on the base to combat



noxious and invasive weeds. Volunteers wrapped nearly 50 trees with trunk protectors and installed 25-gallon irrigation bags on 30 other trees. During a separate event, over 35 participants helped create new pollinator-friendly gardens around the base. Volunteers removed half-dead juniper shrubs, roots, and old soil from gardens and then filled excavated beds with new topsoil. Over 130 native, pollinator friendly plants were added.

This project resulted in an increased landscape cover for both trees and pollinator-friendly gardens in the form of native plants. This natural cover provides great habitat for pollinators such as bees and insects and reduces the need for herbicide. This project also made significant improvements to the aesthetic quality of the base's urban and recreational areas. During the course of their service, volunteers took part in an educational course about trees and proper pruning techniques. Volunteers were involved in several activities of their choosing: tree trimming, tree maintenance care, pollinator garden pre-work (digging), planting of flowers, tree-planting, clean-up, and equipment and logistics.



**Contact:** Dr. Elin Pierce, Natural Resource Specialist | 406-451-1803

## **Shaw Air Force Base | South Carolina Natural Resource Project: Poinsett Range Wildlife Plantings**

### **Pollinator Project**

**Project Date:** October 2015

**Project Summary:** Poinsett Range, home to Shaw Air Force Base, is managed extensively for Red-Cockaded Woodpeckers (RCW) and is covered predominately by pine forests. Volunteers worked for over 40 hours planting perennial trees, shrubs, forbs, and flowers to attract pollinators and wildlife to add biodiversity to the landscape. In total, 157 trees and 110 plants were introduced to Poinsett Range as a result of the project.

Poinsett Range is available for limited outdoor recreation when not in use for air to ground bombing and gunnery military training by the Air Force. These habitat improvements will increase wildlife sightings and diversity, adding to the quality of the outdoor experience for the public and for military personnel stationed at Shaw AFB and nearby installations.

**Contact:** Ronald June, Chief, Natural & Cultural Resources | 803-895-5193

## Tyndall Air Force Base | Florida

### Natural Resource Project: Kiosk and Nature Trail Improvement

**Project Date:** November 7, 2015

**Project Summary:** Volunteers assisted Tyndall Natural Resources staff with improving Deer Run Nature Trail by clearing the trail of weeds and debris and trimming overgrown vegetation. In addition to the cleanup, volunteers and on-base personnel constructed an educational display along the trail. Group tours along Deer Run Nature Trail will now be able to access information about the longleaf pine ecosystem, wetlands, and the diverse native flora and fauna found on the Air Force Base. The trail improvements will make walking the trail easier for the general public and other groups that come to Tyndall for environmental education tours.

Both civilians and airmen at Tyndall Air Force Base participated in the volunteer project to make Deer Run Nature Trail a more hospitable habitat for herbaceous wetland plants. Over the course of the project, volunteers discussed the importance the longleaf pine ecosystem, prescribed fire, wetlands diversity, and groundcover diversity.

**Contact:** Melanie J. Kaeser, Ecologist | 850-381-7853



## United States Army



### **63rd Regional Support Command | California** **Cultural and Natural Resource Project: Restoration of Mare Island Historic Guard Shack, A279**

**Project Date:** September 26 and December 12, 2015



**Project Summary:** The Mare Island Historic District encompasses a majority of the former Mare Island Naval Shipyard, located in Vallejo, California. The 63<sup>rd</sup> Regional Support Command (RSC) is responsible for its historic resources, such as two guard shacks built in the 1940s as a gateway to the Ammunition Depot. Thousands of visitors and employees passed by the guard shacks each day at the height of World War II. Over the course of two work days, volunteers from the Mare Island Shoreline Heritage Preserve and the community contributed 50 hours to help restore one of the two guard shacks. Historic markers were installed, native flowers were

planted, and the guard house was swept and painted. The planting of native flowers dramatically increased the natural resources in the area. Volunteers also removed 120 pounds of trash and 20 pounds of invasive vegetation.

Community members and Department of Defense staff have expressed their appreciation for the restored guard house, which has brought attention to the historic contributions of the many men and women who worked at the Ammunition Depot during World War II. 63<sup>rd</sup> RSC hopes to restore the second guard house in the near future.

**Contact:** Margaret Magat, Cultural Resources Program Manager | 650-526-9727

### **Fort A.P. Hill | Virginia** **Cultural and Natural Resource Project: Travis Lake Historic District**

#### **Pollinator Project**

**Project Date:** October 23-24, 2015

**Project Summary:** The Travis Lake Historic District is centered on an 18-19<sup>th</sup> century impounded lake that was initially constructed to support a mill, and briefly supported winter encampments during the Civil War. Now located on Fort A.P. Hill, Travis Lake serves as a recreational area and wildlife refuge with lodging available in historic buildings and modern cabins. Fort A.P. Hill conducted events at three historic buildings, including a springhouse, chicken house, and barn, to clean and beautify the area. On the first work day, five volunteers prepared the area



by using chainsaws to cut invasive vegetation and reinforcing structural beams to allow safe entry in the buildings. On the second work day, 17 volunteers, including five Boy Scouts, removed 80 pounds of previously cut vegetation and invasive plants; maintained native plant species and ornamental vegetation conducive to pollinator species; removed 500 pounds of trash and debris in the buildings and on the roadside; and cleaned, reinforced, and updated the interior and exterior of the historic buildings.

Each work day began with a briefing that included a tour and information on the history of the Travis Lake Historic District, as well as important safety information about the site. Archaeological Resources Protection Act (ARPA) training was also conducted at the nearby Liberty Church (ca. 1850) to raise awareness of preservation laws that affect Federal lands and historic resources.



**Contact:** John Mullin, Cultural Resource Manager | 804-633-8761

## Fort Bragg | North Carolina Cultural and Natural Resource Project: Pollinator Garden at the Directorate of Public Works Environmental Classroom

### Pollinator Project

**Project Date:** September 24, 2015



**Project Summary:** The Directorate of Public Works (DPW) Environmental Classroom is a high profile meeting space for numerous classes, meetings, and briefings for distinguished visitors. Twenty-five volunteers removed 1,200 pounds of weeds, invasive plants, and underbrush outside of the classroom. In this area, over 400 native plants and a tree were planted to create a large pollinator garden. The community space is now noticeably more inviting and provides habitat for pollinator species. The area also provides soldiers and civilians with a relaxing place to take a break during classes.

Throughout this project, volunteers learned about the importance of NPLD and how the event will benefit the community as a whole. One volunteer reflected:

*“Because my husband was active-duty Army, we’ve lived all over the United States. I’ve had the pleasure of participating in National Public Lands Day numerous times. It never ceases to amaze me the number of volunteers who are willing to give their time and effort to improve and enhance our natural landscapes. These people, in each of their own way, have left a legacy for future generations to carry on and enjoy. Just as those before us and those still to come, we all have a responsibility to be good stewards of our earth.”*

**Contact:** Mindy Love, Environmental Education, Training, & Outreach Manager | 910-432-8476

## Joint Base Lewis-McChord | Washington

### Natural Resource Project: Western Gray Squirrel Habitat and Oak Woodland Restoration

#### Pollinator Project

**Project Date:** November 17-18, 2015

**Project Summary:** Joint Base Lewis-McChord is a 92,000-acre island of biodiversity, surrounded by urban and suburban sprawl. It hosts over 45 species of rare and listed animals, is a hotspot for western gray squirrels, and has the largest and most intact patches of several rare habitat types including the Garry oak woodland and Puget lowland prairie. JBLM Fish & Wildlife biologists and 16 volunteers removed invasive shrubs from an oak woodland edge and completed a variable density stand thinning treatment in the oaks. Volunteers also planted over 2,000 rare prairie plants, built and installed 40 new nest boxes for western purple martin birds, and drilled over 500 tunnel nests for burrowing pollinators. The project improved habitat quality for a variety of rare and listed species as it opened up the habitat interface between a high quality oak woodland and an adjacent prairie. This allows better access for wildlife while also encouraging the survival and establishment of native plants.



Biologists worked side by side with volunteers, describing the ecology of the site, challenges, objectives, and the expected outcome of their effort. Volunteers were also shown LiDAR data revealing the geologic and ecological history of the area. This helped them to understand the need to preserve the remaining prairies and oak woodlands.

**Contact:** Dennis Aubrey, Conservation Ecologist | 360-631-8556

## Redstone Arsenal | Alabama

### Natural Resource Project: Redstone Arsenal Path to Nature Restoration

#### Pollinator Project

**Project Date:** November 18, 2015

**Project Summary:** Redstone Arsenal's Path to Nature is an environmental and cultural outdoor education center which began as cooperative effort with the Huntsville City School System to provide wetland field trips. Volunteers from the community gathered to dedicate 60 hours towards maintaining the Path to Nature trail and associated educational structures. Nearly 80 signs and posts along the wetland and archaeological interpretative trail were cleaned and stabilized. Volunteers also cleared invasive vegetation off of the path and patched washed-out portions of the trail, greatly improving its status and condition.

Volunteers will regroup in the spring to construct raised garden beds for a pollinator garden, concentrating on plant species to support the varied life stages of the monarch butterfly. This will be an educational area highlighting the importance of pollinators and habitat, and will have a positive impact to the natural resources of Northern Alabama.

**Contact:** Christine Easterwood, Wildlife Biologist | 256-842-8697



## Schofield Barracks | Hawaii Cultural and Natural Resource Project: Native Hawaiian Interpretive Garden Improvement

### Pollinator Project

**Project Date:** September 26; November 2, 21; and December 2, 6-7, 2015



**Project Summary:** Over several work days, 18 volunteers contributed over 200 hours to weed control within the various islands of an interpretive garden at Schofield Barracks. Each section of the garden represents a unique habitat and is accompanied by an interpretive sign that provides ecological and cultural information on the site. Volunteers removed six truckloads of large trees and weeds and planted 34 native 'ohai, ma'o, kawelu, and endangered ma'oloa trees and plants within the garden. Planting native and endangered plants will help attract native pollinators to the area and preserve the species protected by this program. Ma'oloa has also been used for making special Hawaiian kapa (fabric). Volunteers used tools to take down old signs and helped assemble and paint a shelter.

The project improved habitat of several types of native Hawaiian ecosystems within the garden, including dry and mesic forests and a coastal dune area. Controlling the weeds has reduced the competition for light, nutrients, and water for native plants. Volunteers took the time to walk around the garden and interpret the resources within each section. Volunteers also took a tour through the rare plant nursery, increasing their connection to their endangered species work.

**Contact:** Celeste Hanley, Environmental Outreach Specialist | 808-656-7741

## Umatilla Army Depot | Oregon Natural Resource Project: Nests and Science for Owls and Kestrels!

**Project Date:** October 18-23, 2015

**Project Summary:** Umatilla Army Depot held their fifth annual NPLD event over the course of six days with the goal of installing and upgrading burrows for burrowing owls, a species of special concern in the western United States. About 20 years ago, badgers, the natural burrow-makers for burrowing owls, had been trapped off the property. While the habitat was otherwise sound, burrowing owls were severely limited by the lack of available nest burrows. In 2008, there were only three to four pairs of owls left on the Depot. Volunteer work to install artificial burrows, often on NPLD, has helped the Depot to significantly increase their owl population to 54 pairs. In October 2015, 11 volunteers, from as far as Florida, installed and upgraded 25 burrows and performed maintenance on 27 burrows. This was enough for 26 owl pairs. Volunteers also prepared and installed five American Kestrel nest boxes.



The event was a hands-on technical training program focused around the design, installation, and use of artificial burrows for the conservation, research, and management of burrowing owls. Volunteers received a “Users Guide to Installation of Artificial Burrows for Burrowing Owls.” Volunteers were also able to capture some of the owls during the event and help with their banding, examination, data collection, and release.

**Contact:** Jeff Mach, Natural Resources Conservation Manager | 503-584-3493

## **White Sands Missile Range | New Mexico** **Natural Resource Project: Pollinator Garden at White Sands Missile Range**

### **Pollinator Project**

**Project Date:** September 30, 2015



**Project Summary:** White Sands Missile Range, north of Las Cruces, Mexico, has been the center of U.S. military testing for 70 years and is the largest military installation in the United States. The missile range takes in two million acres of Chihuahuan Desert terrain. Twenty volunteers helped establish a pollinator garden with 280 plants by planting, watering, installing rabbit-proof fencing, installing drip irrigation, and laying out rock mulch. The project turned an area of bare dirt into a thriving garden spot, and increased butterfly species dramatically. To date, White Sands Missile Range has documented 15 butterfly species and expects many more in the spring. Due to increased interest in butterflies, a butterfly checklist has been posted at two places in the garden.

Volunteers, including a Girl Scout Troop, were educated on the proper way to plant, how to create a water well around each plant, and the watering techniques of desert-adapted plants.

**Contact:** Trish Cutler, Wildlife Biologist | 575-678-2029



# United States Army/Air National Guard



## Camp McCain Training Center | Mississippi Natural Resource Project: Hardwood and Fruit Tree Planting

### Pollinator Project

**Project Date:** November 14, 2015

**Project Summary:** Fifteen students from Grenada High School's Future Educators Club planted 10 bald cypress and 10 wild pear trees in the cantonment and training areas to enhance natural resources and aesthetics. These trees are located along a major fishing lake, improving wildlife habitat. Additional plantings will occur later this winter.

Volunteers learned about the Mississippi Army National Guard, Camp McCain Training Center, and the natural resources program. Volunteers received a briefing on proper tree planting and tree care and the benefits of these trees on the habitat at Camp McCain.



**Contact:** Mark Williams, Natural Resources Specialist | 662-294-0305

## Camp Shelby | Mississippi Natural Resource Project: Pollinator Plot Project

### Pollinator Project

**Project Date:** November 7, 2015

**Project Summary:** Camp Shelby's undeveloped lands, like much of Mississippi over the past century, have been managed for yellow pine production. Because of this, many pollinator-friendly species of plants were neglected and even destroyed in favor of dense stands of plantation pine. Camp Shelby is currently in the process of reversing this timber management strategy by converting plantations back to the native longleaf pine ecosystem and adding pollinator-friendly species as successional habitat adjacent to the mature longleaf stands. In this effort, volunteers contributed 40 hours to



plant 148 flowering plants, shrubs, and trees at Camp Shelby's Walker and Dogwood lakes. Volunteers also removed 20 pounds of trash.

These plants provide food and shelter for pollinators while also contributing to the aesthetics of the recreational lakes. Volunteers learned about the reasoning behind the project, the importance of pollinators, and proper methods for planting. When mature, their work could also spread to other areas on the installation via seed dispersal.

**Contact:** Robert Crowe, Natural Resource Specialist | 601-558-2157

## **Camp Shelby Joint Forces Training Site | Mississippi Cultural and Natural Resource Project: Pearce Family Cemetery Restoration and Pollinator Project**

### **Pollinator Project**

**Project Date:** October 24, 2015

**Project Summary:** Volunteers from the Mississippi National Guard Environmental Office assisted with an initial cleanup and fence installation for a historic Camp Shelby cemetery. The cemetery is abandoned and contains the graves of early settlers from the Red Hill community of Camp Shelby. Volunteers, including the Youth Challenge Academy and Willow Grove Baptist Church youth group, completed the cleanup, dug holes, planted pollinator species plants, and trimmed existing trees and hedges. The cemetery is now accessible and has been reclaimed from overgrowth and abandonment.

The event provided a historic background lesson for volunteers on the history of Camp Shelby and those who once lived there. Participants were able to understand the importance of paying respect to their ancestors and those that fought for our freedom. The cemetery will be used as a location for conducting historical research, picnics, and meditation.



**Contact:** Rita McCarty, Cultural Resources Program Manager | 601-558-2596

## **Florence Military Installation | Arizona Natural Resource Project: Native Plant Demonstration and Beautification Project**

### **Pollinator Project**

**Project Date:** October 10, 2015

**Project Summary:** Located in the Sonoran desert southeast of Phoenix, Florence Military Reservation (FMR) is the primary year-round training installation site for the Arizona Army National Guard (AZARNG). During the summer, users of FMR endure temperatures over 100 degrees. This project provided a shaded multipurpose rest area for users, restored native vegetation, beautified the shooting range, and re-established habitat for native pollinators. Over 38 volunteers from the AZ Department of Emergency and Military Affairs, AZARNG, a Boy

Scouts Troop, and the community spent 181 hours planting 130 native trees, shrubs, and cactus and installing drip irrigation. An Eagle Scout Candidate with the Boy Scouts worked with installation staff, expending an additional 117 hours on the project proposal, site plans, and logistics prior to the volunteer day. Two environmental educational kiosks were installed and 10 picnic tables were built and placed under the trees.

The Boy Scout Troop had a campout on site at FMR. During the campout the Scouts were given a presentation by the Range Operations Supervisor about the Guard's mission, had a tour of the small arms ranges, and talked with National Guard soldiers. A brief presentation was also given that included environmental awareness and information about the AZARNG activities and the nature of the NPLD event. Volunteers learned about the advantages of planting native vegetation, how to plant and water trees, and shrubs and techniques used.

**Contact:** Janet Johnson, Natural and Cultural Resource Programs Manager | 602-267-2915



## **Fort Custer Training Center | Michigan** **Cultural and Natural Resource Project: Fort Custer Training Center NPLD**

### **Pollinator Project**

**Project Date:** Sept 26-27, 2015

**Project Summary:** Forty volunteers contributed 500 hours to develop wheelchair accessible wildlife viewing stations and a native pollinator plot. A Boy Scout Troop helped design and create the wildlife viewing stations by developing a materials list, assisting in the construction of structures, and identifying suitable locations for structures on post. Participants learned concepts such as Universal Design principles, carpentry design, teamwork and leadership, and habitat richness. The wheelchair accessible stations will ensure that access to natural resources is provided for all people of the community.

Partner organizations, including the National Wild Turkey Federation, Wild Ones, and Oldsmobile Outdoor Club also created a native pollinator plot. Group involvement was utilized to determine site location, seed mix, site prep, planting, and a care schedule. This project turned a field of invasive Spotted Knapweed into a high quality rich habitat to promote pollinators.

**Contact:** Jonathan Edgerly, Natural Resource Specialist | 269-731-6570



## McCrary Training Center | South Carolina Natural Resource Project: McCrary Training Center Pollinator Project

### Pollinator Project

**Project Date:** October 30, 2015

**Project Summary:** McCrary Training Center partnered with Lugoff Eglin Middle School to perform trail maintenance and replace signage along Brigadier General Harry J. Vann Interpretive Nature Trail. This trail provides the public and military personnel with a place to exercise and learn about the area's natural and cultural resources.

A presentation focusing on bees, their role as pollinators, and their benefits to the military was given by Colonel Todd Shealy, Garrison Command for McCrary Training Center. After the presentation, the volunteers used their artistic talents to paint bee boxes with their own personal designs. These boxes will be used to propagate the existing Honey Bee population.



**Contact:** Layne Anderson, Natural Resource Manager | 803-299-2237

## Fort Lupton Readiness Center | Colorado Natural Resource Project: Site Rehabilitation and Enhancements

### Pollinator Project

**Project Date:** September 26 and October 3, 2015

**Project Summary:** The Center for Environmental Management of Military Lands (CEMML) at Colorado State University (CSU) helped direct a conservation volunteer project at the Fort Lupton Colorado Army National Guard (COARNG) Readiness Center. The Center hosts many public functions and is an integral part of the City of Fort Lupton. A garden was planted along the entrance walkway to the Readiness Center with two pounds of wildflower seed and was accented with sculptural rocks. As the pollinators disperse, the native wildflowers will have a positive impact on local pollinator species, as well as on the regional population. Volunteers helped clear the pre-existing dryland vegetation, install landscape edging, lay landscape fabric, design rock sculptures, and place topsoil and cobble. One week later, 22 dead and dying trees were removed and healthy native trees were planted in their place. The existing irrigation system was modified to provide adequate water to facilitate growth.



The volunteers were briefed on the Bravo Co., 1st Battalion, 157th Infantry training mission and toured the Readiness Center. Two educational talks were also provided during the project on the history of the COARNG and Fort Lupton, and on the importance and ecology of pollinator species and the benefits of the selected wildflower seed mixes.

**Contact:** Joseph Zambo, Facilities Manager | 720-219-7522

# Silverbell Army Heliport | Arizona

## Natural Resource Project: Pollinator Garden

### Pollinator Project

**Project Date:** December 5, 2015

**Project Summary:** Silverbell Army Heliport is in a wildlife corridor for several species of birds, butterflies, and bats. Twelve volunteers from the community contributed a total of 72 hours to add native plants to an area where non-native plants had previously been. This garden will encourage the growth and success of these different species.

An on-site natural resources manager educated participants about the different plants and animals found on the installation. Volunteers learned about the importance of pollinator plants and about how the military works to preserve and protect the community.

**Contact:** Calvin L. Monroe, Physical Plant Supervisor | 520-750-5102

## United States Marine Corps



### Marine Corps Air Ground Combat Center | California Cultural and Natural Resource Project: Monarch Butterfly Garden Project

#### Pollinator Project

**Project Date:** September 26, 2015

**Project Summary:** Volunteers from the Marine Corps Air Ground Combat Center (MCAGCC) and the local community helped construct a raised bed garden and flagstone pathway as part of the Archeology and Paleontology Curation Center's "Monarch Butterfly Garden." Twenty volunteers participated in building the 750 cubic foot raised bed. Since then, the garden has been filled with shrubs native to the Mojave Desert that attract pollinating species. Most importantly, native species of milkweed were planted, which are required for the life cycle of the Monarch butterfly. A park bench, information kiosk, signage, and a full color brochure were also added to encourage and enhance visitation to the site.

The Monarch Butterfly Garden complements the neighboring Curation Center gardens, including the Cultural Heritage Garden, Desert Tortoise Garden, and Cactus Garden. Each garden provides the Marines and the families of MCAGCC with a beautiful and educational landscape of local vegetation. The gardens introduce those unfamiliar with the Mojave Desert to the abundant life and ecology of this unique corner of the world.

**Contact:** Charlene Keck, Archeologist/Collections Manager | 760-830-7650

## United States Navy



### Joint Base Pearl Harbor-Hickam | Hawaii Cultural and Natural Resource Project: Loko Pa`aiiu Fishpond Cleanup

#### Pollinator Project

**Project Date:** October 3, 2015

**Project Summary:** Joint Base Pearl Harbor-Hickam (JBPHH) is home to Loko Pa`aiiu, an ancient Hawaiian fishpond that is over 400 years old. Local community groups, including Boy Scouts, Girl Scouts, Active duty military, Aiea Community Hawaiian Civic Club Members, and the Hawaii Air National Guard joined together for a cleanup of Loko Pa`aiiu. The event started with a Hawaiian pule (poo-leh) or prayer asking the Hawaiian ancestors for permission to enter the fishpond. Volunteers then cleared the fishpond of invasive papyrus sedges and numerous other invasive plants that had overtaken the surrounding marsh area and planted 500 native Hawaiian trees, groundcovers, and shrubs. The project restored the pond's surrounding area to its original appearance and will attract native birds, like the endangered Hawaiian Black-necked stilt or Ae`o (ah-ay-oh) and the Black-crowned night heron or `Auku`u (ow-koo-oo).

A JBPHH Archaeologist and Cultural Resources Specialist briefed the volunteer group on how ancient Hawaiians lived a sustainable lifestyle by using fish to supplement their daily diets. A JBPHH Natural Resources Specialist explained the importance of replacing invasive plant species with native Hawaiian plants. Jeff Pantaleo, archaeologist at the Naval Facilities Engineering Command Hawaii, commented "The pond is still in good condition. It just goes to show that everyone from the local community to the military presence here on the island are attracted to these preservation efforts, and it really helps to build our relationship with the local community."

**Contact:** Patricia Colemon, Outreach Program Manager | 808-473-0369

### Naval Air Station Oceana Dam Neck Annex | Virginia Cultural and Natural Resource Project: Dune Restoration

#### Pollinator Project

**Project Date:** October 22-24, 2015

**Project Summary:** Naval Air Station Oceana Dam Neck Annex (NASO-DNA) annually partners with the National Aquarium in Baltimore (NAIB) to execute volunteer-based dune restoration projects. Over the course of the three days, 100 volunteers planted 12,720 native pollinator plants to help keep the dunes intact along a 2.1 acre stretch of beach. Community volunteers included a mix of active duty, retired, and civilian military, as well as Girl Scouts, Boy Scouts, and staff from Hewlett Packard, Virginia Aquarium, and Marine





Science Center. Enhancing the dunes creates habitat for a wide variety of wildlife and provides food, shelter, and water to various migratory birds, pollinators, and other species of special concern. Properly managed dunes also increase nesting grounds for endangered sea turtles, like the Loggerhead and Kemp's Ridley sea turtles.

National Aquarium and installation staff provided an educational briefing to volunteers on the importance of dune conservation, native plant diversity, and how to properly plant vegetation. With dune habitat diminishing at alarming rates, improving existing dune habitats is of the utmost importance. Even small disruptions in the dune system can cause salt-water infiltration into the ground water, threatening local species. Additionally, the dunes provide vital military training opportunities and protect the facility's infrastructure from storm damage. Their importance has been acknowledged in recent years and they are now a priority for conservation. Projects like this one work to restore sensitive ecological habitat areas that have been damaged.

**Contact:** Michael Wright, Installation Natural Resources Manager | 757-433-3461

## Naval Support Activity Hampton Roads | Virginia Natural Resource Project: Pollinator Project

### Pollinator Project

**Project Date:** October 29 - November 24, 2015



**Project Summary:** The Naval Medical Center Portsmouth, a large hospital complex on the Main Branch of the Elizabeth River, is located on Naval Support Activity Hampton Roads (NSA HR). The facility provides acute care and outpatient health care for area military personnel and their families. The hospital site consists of approximately 110 acres within riparian rights and occupies a prominent finger of land with water frontage on three sides. In 2014, NSA HR created a 15 x 30 foot pollinator garden. This year, NSA HR partnered with the Elizabeth River Project to repair and enhance this pollinator garden. Twenty navy sailors and civilians volunteered to perform necessary maintenance to the garden, including spreading mulch, weeding, and preparing the site for planting. On November 24, 275 native shrubs and perennials were added to rejuvenate the garden and attract butterflies.

Participating volunteers learned about the site and of the importance of preserving natural resources. The pollinator garden enhances wildlife habitat and attracts pollinators, as well as provides a place for Wounded Warriors and personnel to relax and enjoy the view of the Scotts Creek.

**Contact:** Linda Hicks, Environmental Director | 757-836-1862

## Naval Support Activity Monterey | California Cultural and Natural Resource Project: Historic Arizona Garden Revitalization

### Pollinator Project

**Project Date:** October 9, 2015



**Project Summary:** Naval Support Activity Monterey is home to the Naval Postgraduate School which moved from Annapolis, MD to the historic Hotel Del Monte and its surrounding grounds in the 1940s. The hotel was originally constructed in the 1880s by railroad pioneer Charles Crocker and provided an exotic setting that rivaled the great European hotels and gardens. An elaborate garden with desert plants was created by noted landscape designer Rudolph Ulrich. For NPLD, the NSA Monterey Environmental Division coordinated an event to revitalize the 127 year old culturally significant Arizona Garden. Twenty-five local volunteers planted 50 cacti and succulent plants and removed approximately 500 pounds of invasive plants. The newly-planted cacti and succulents will support pollinators and provide an area for migratory birds to rest during the breeding

season. The garden's refurbishment will also be enjoyed by Navy students and staff as an outdoor space to rest and reflect.

The event was an important opportunity for volunteers to learn about the implications of the current California drought and why the proper planting of water efficient plants is important for sustainability. Volunteers were also given an introduction to the historical significance of the Arizona Garden and its surrounding grounds.

**Contact:** Todd Wills, Natural Resources Specialist | 831-656-2850

## Naval Weapons Station Seal Beach | California Natural Resource Project: Water-Wise Pollinator Demonstration Garden

### Pollinator Project

**Project Date:** December 19, 2015

**Project Summary:** Navy and U.S. Fish and Wildlife Service personnel, as well as 40 adult and youth members of Boy Scout Troop 74 planted over 350 native plants in an area that had been previously overtaken by invasive species. The native plants and shrubs will provide habitat for a number of bird and mammal species including the state species of concern, San Diego Black-tailed Jackrabbit. The habitat will also benefit a large number of pollinator species. Personnel from the Navy, Seal Beach National Wildlife Refuge, and the Friends of Seal Beach National Wildlife Refuge prepared the site for the project.

This is the sixth year in a row that Troop 74 has participated in a NPLD event at the Weapons Station. Working with native plants allows the Boy Scouts to satisfy requirements



toward their Second Class rank. Due to the military mission at Naval Weapons Station Seal Beach, opportunities for the public to access these areas are limited. This year's event proved once again to be an ideal opportunity to involve community volunteers in restoration of land adjacent to the refuge wetlands.

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