

CHAPTER 2: ENVIRONMENTAL OUTREACH

The OANRP outreach program is tasked with:

- conducting outreach to the military (including troops, their families and civilian contractors);
- conducting outreach to local communities about natural resource management;
- educating local communities and students about Hawaii’s natural resources and careers in natural resource management;
- managing an active volunteer program which assists staff in meeting IP goals, particularly by conducting field actions.

The following text highlights outreach activities from the 2016 reporting year.

Volunteers

During the reporting period the outreach program continued to coordinate and lead an average of six volunteer trips each month and successfully met volunteer weeding goals. In addition to the ongoing generous support from a few of the program’s most dedicated volunteers, baseyard hours increased this year due to the National Public Lands Day project to improve the Native Hawaiian Interpretive Garden. Additional information on this project is located in the last section of this chapter.

The table below compares volunteer participation with OANRP for this year with that of previous years, distinguishing between volunteer efforts spent in the field and around the OANRP baseyards.

Report Year	Total Volunteer Hours for Field Days*	Total Volunteer Hours at Work Site**	Total Volunteer Trips	Total Baseyard Volunteer Hours***
2016	3,575.5	974.5	68	537.75
2015 ⁺	3,013.5	824	52	333.25
2014	4,421.5	1,133.75	78	490.75
2013	3,767.5	957	69	569.5
2012	4,302.5	1,261.5	78	602.5
2011	4,194	1,231	76	618
2010	3,415	1,299	58	885

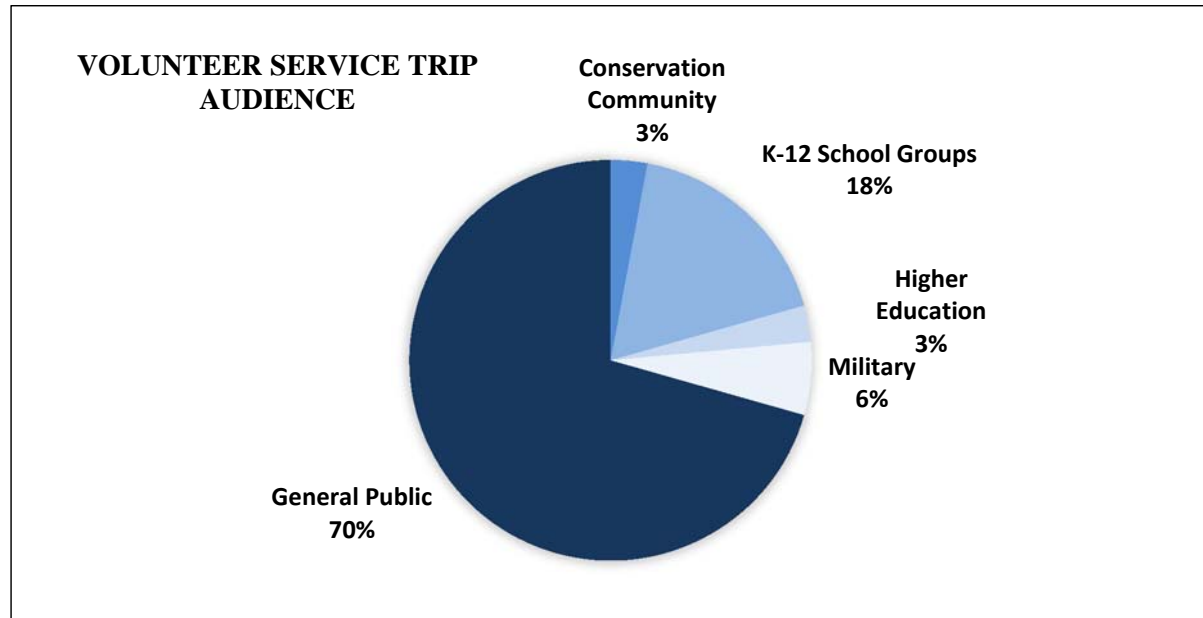
**Includes driving time to and from trailhead, safety briefing, hiking time to and from work site, and gear cleaning time at end of day*

***Includes actual time spent weeding, planting or monitoring*

****Includes propagule processing, nursery maintenance, gear preparation, outreach support and maintenance of interpretive native gardens.*

⁺Shorter reporting year, spanning nine (9) months

The general public are the primary participants in the volunteer program and include members of the community with no affiliation, but also special interest groups, such as hula halau. School groups also make up a large portion of the volunteer program audience. The figure below depicts the variety of audiences that participated in OANRP volunteer trips during this reporting year.



The majority of volunteer effort continues to focus on control of incipient and invasive weeds at the Kaala MU. A new volunteer project targeting invasive *Odontonema cuspidatum* has also contributed to the increased effort at Kaala. A large portion of volunteer time this reporting year has also been spent within the Kahanahaiki and Palikea MUs.

Coordinating with the Ecosystem Restoration Program, outreach staff led revegetation projects with volunteers in habitat restoration sites at Palikea and Kaala MUs. These additional projects provided volunteers with opportunities to plant common natives in areas they had also weeded in the past.

The table below summarizes volunteer service trips by location.

Volunteer service for reporting period 2016

Management Unit	Projects	Number of Visits
Kahanahaiki	Habitat weed control in WCAs	19
Kaala	Incipient weed control in <i>Sphagnum palustre</i> ICAs	5
	Incipient weed control in other ICAs	21
	Habitat weed control in WCAs	7
	Revegetation projects	2
Makaha I	Habitat weed control in WCAs	6
Palikea	Incipient weed control	5
	Habitat weed control in WCAs	4
	Revegetation projects	1
West Makaleha	Habitat weed control in WCAs	7
Kaluaa	Habitat weed control in WCAs	7
	Incipient weed control	1
Pualii	Habitat weed control in WCAs	3

The following list highlights additional volunteer coordination conducted by OANRP outreach staff.



- Maintained a volunteer database of 1,858 individuals and communicated regularly with active volunteers.
- Coordinated volunteer opportunities with OANRP field teams for individuals seeking careers in conservation.
- Facilitated an Eagle Scout Project with Troop 175, which included repair work along the Kaala boardwalk and the building of steps at the steep slope where boardwalk ends. The Scouts completed the project on May 28 and volunteered a collective total of 82 hours.

LEFT: Boy Scouts from Troop 175 assist in repairing the Kaala boardwalk to fulfill an Eagle Scout Project requirement.

Internships

Outreach staff coordinated internships at OANRP and with cooperating agencies. Outreach staff and field crew planned and implemented a four-day orientation for summer interns, consisting of new-hire training modules and hands-on field activities. Internship opportunities provided valuable natural resource management training for the next generation of conservationists. Participants experienced terrestrial field work in a variety of native ecosystems while working alongside experienced professionals. Bulleted points below highlight outreach staff efforts with the interns.

- Evaluated and scored 32 applicants, interviewed eight applicants and awarded four individuals with three-month, paid OANRP summer internships. Interns were placed with field and

horticulture crews to gain valuable career skills and experience in the field of natural resource management.

- Evaluated, scored and interviewed two applicants, and awarded one individual with an 11-week, Pacific Internship Program for Exploring Science (PIPES) internship with OANRP. Intern was tasked with setting-up a common-native plant restoration trial, with guidance from field team staff, and presenting preliminary findings at the 2016 PIPES Student Symposium at the University of Hawaii, Hilo.
- Two interns from previous reporting years have since joined the OANRP staff in the following positions: Natural Resource Management Technician and Plant Propagation Assistant.

Educational Materials

Outreach staff developed new educational materials in various media focused on natural resource issues specific to MIP and OIP species and their habitats. These contributions are summarized by category in the bulleted list below.

- Outreach Exhibits and Activities:
 - Look what’s happening in the Hawaiian forest activity
 - PURPOSE: Youth and families learn about monitoring in the forest through an engaging forest backdrop with “binoculars”. A monitoring card designed for the activity guides participants through the monitoring tasks. Participants take home the monitoring card, which contains information on volunteering with OANRP.
 - Elepaio banner
 - PURPOSE: Provide overview of natural history, management and status of endangered Oahu elepaio to youth and families at outreach events. Segues into “Look whats happening in the Hawaiian forest” activity.
 - Natural resources pledge tree
 - PURPOSE: Visitors at the OANRP booth at community outreach events commit to a personal action to protect natural resources by writing a pledge on a wiliwili leaf and placing it on the large, metal tree.



TOP: Outreach specialist Kim Welch explains the “What’s happening in the Hawaiian forest?” activity to a youth at Schofield Barracks Earth Day in front of the elepaio banner. RIGHT: A Mauka to Makai Earth Day attendee at the Waikiki Aquarium positions her pledge to protect natural resources on the metal wiliwili tree.



- Signs
 - Entering Critical Habitat
 - PURPOSE: Warn about fire policy and delineate critical habitat area for Oahu elepaio for Soldiers working in Schofield Barracks East Range.
- Presentations:
 - Updated career day presentation
 - PURPOSE: Updated existing career day presentation to suit a new venue at Kalaheo High School for their career day.
- Other:
 - oanrp.com
 - Expanded content on OANRP volunteer site, www.oanrp.com, to provide prospective and current volunteers with information on how to get involved as a volunteer, upcoming volunteer opportunities and sign up process.
 - Bishop Museum Faces of Conservation
 - Supported Bishop Museum bird exhibit by providing a variety of captioned photos featuring OANRP staff. Photos were displayed in a running slideshow on a large screen within the exhibit hall and featured staff conducting management actions in support of endangered species.
 - Kupu Environmental Fair Job Board & Tablet Slideshow
 - Developed a mock job board for use at an environmental fair for youth interested in conservation. Board included current OANRP job and internship announcements. A Samsung Galaxy tablet displayed a slideshow of staff working on various management actions in the field.
 - NPLD 2015 Button
 - Created a button for participants in the 2015 National Public Lands Day weeding and planting activities.



Senior natural resource manager Joby Rohrer posts the “Entering Critical Habitat” sign for elepaio at Schofield Barracks East Range.

Troop Education

Outreach staff conducted presentations for Army troops, contractors and other active duty military personnel, highlighting the relationship between training activities and natural resources on Army training lands. In addition, a presentation covering natural resource concerns on Oahu Army training lands, is given by Schofield Range Control staff at bimonthly Officer-In-Charge/Range Safety Officer (OIC/RSO) Briefs held at Schofield Barracks. The brief provides rules and regulations pertaining to each Army training area on Oahu. Attendance is mandatory for representatives from each military Unit that schedules time on Oahu training ranges.

Event	Description	Number of presentations	Number of People Served
Environmental Compliance Officer (ECO) training presentation: "Protecting Natural Resources"	A one-hour presentation for the ECO training courses held at Schofield Barracks.	9	211
Training Area Presentation: "Protecting Natural Resources in Makua"	A 15-minute presentation on natural resource considerations at Makua Military Reservation (MMR).	3	120
Total number of people served:			331

Outreach Events

Outreach staff disseminated information on natural resources specific to Army training lands at local schools, community events and conferences. These activities are summarized in the table below. Total number of outreach activities = 15

- Total number of people served (approximated) = 7,887

Outreach activities for FY 2016

Event	Estimated # of People Served	Audience
Mauka to Makai Earth Day Event at Waikiki Aquarium	3000	General Public
Camp Mokuleia Staff Interpretive Hike at Kaala	9	
Mililani Waena Elementary School Teachers Interpretive Hike at Kaala	10	
Kula Kaiapuni O Waiiau Hawaiian Immersion School Interpretive Hike at Kaala	25	
University of Hawaii Natural Resources and Environmental Management Class Presentation	30	Higher Education
Hawaii Pacific University Natural Resource Management Class Presentation	19	
Kupu Environmental Fair	200	
Leilehua High School Career Day Presentation	120	K-12
Kalaheo High School Career Day Presentation	60	
Hoala School Field Trip to OANRP Baseyard	12	
Hale Kula Field Trip to OANRP Baseyard*	102	Military
Helemano Spring Fling	500	
Schofield Fun Fest	2500	
Schofield Earth Day	800	
Fort Shafter Earth Day Festival	500	
Total Number of People Served	7,887	

*denotes K-12 audience, in addition to being military

Contributions to Conferences/Workshops

OANRP staff contribute to outreach by presenting research findings at various conferences throughout the Pacific. This reporting year, five staff presented at the Ecology and Management of Alien Plant Invasions 13th International Conference and four staff presented at The 3rd Annual Oahu Weed Workshop. These and other presentations are listed in the table below.

Presentation Title	Format	Author/leader name(s)	Venue	Date
Restoring <i>Psidium cattleianum</i> dominated forest in the Waianae Mountains, Hawaii	Poster presentation	Beachy, Jane; Lee, Julia Gustine; Akamine, Michelle	Ecology and Management of Alien Plant Invasions	March 20-24, 2015
No Need for Devil Weed: Eradication Efforts and Challenges in Controlling <i>Chromolaena odorata</i>	Poster presentation	Marsh, Taylor; Beachy, Jane.	Ecology and Management of Alien Plant Invasions	March 20-24, 2015
Assessing the most effective weed control re-treatment interval for <i>Clidemia hirta</i> dominated areas at Opaepa Lower Management Unit, Oahu	Poster presentation	Akamine, Michelle; Beachy, Jane; Bialic-Murphy, Lalasia, Higashi, Michelle	Ecology and Management of Alien Plant Invasions	March 20-24, 2015
Efficacy of Undiluted Herbicide Injections on Tropical Woody Tree Species in Hawaii	Poster presentation	Lee, Julia Gustine; Beachy, Jane	Ecology and Management of Alien Plant Invasions	March 20-24, 2015
Targeted Surveys Provide Opportunities to Assess Threats to Managed Areas	Poster presentation	Lee, Julia Gustine; Beachy, Jane	Ecology and Management of Alien Plant Invasions	March 20-24, 2015
Assessing the most effective weed control re-treatment interval for <i>Clidemia hirta</i> dominated areas at Opaepa Lower Management Unit, Oahu	Oral presentation	Akamine, Michelle; Beachy, Jane; Bialic-Murphy, Lalasia, Higashi, Michelle	2016 Oahu Weed Workshop	February 24, 2016
Vegetation Monitoring Utilizing Gigapan Imagery	Oral presentation	Weaver, William; Akamine, Michelle	2016 Oahu Weed Workshop	February 24, 2016
Restoration case study: <i>Psidium cattleianum</i> dominated forest in the Waianae Mountains, Oahu	Oral presentation	Beachy, Jane	2016 Oahu Weed Workshop	February 24, 2016
Conserving native insect communities: Insights from management projects in the Waianae Mountains of Oahu, Hawaii*	Oral presentation	Krushelnycky, Paul D.	The Entomological Society of America Pacific Branch Meeting	April 3-6, 2016
<i>Drosophila</i> conservation on Oahu: Progress and priorities	Oral presentation	Magnacca, Karl	The Entomological Society of America Pacific Branch Meeting	April 3-6, 2016
Testing the attractiveness and efficacy of baits for the monitoring and control of the thief ant, <i>Solenopsis papuana</i> *	Poster presentation	Ogura-Yamata, Cassandra S. and Paul D. Krushelnycky	The Entomological Society of America Pacific Branch Meeting	April 3-6, 2016

*Denotes OANRP-funded research from other organizations

Public Relations and Publications

Wrote articles, press releases, bulletins and scholarly journal articles; provided coordination and accurate information to the local, state, regional, and national media and agencies. The table below is a summary of all media and publications relating to OANRP management in 2016.

Media coverage and publications in FY 2016

Title	Author	Publication	Date	Format
A Day on the Land at Honouliuli Forest Reserve	Hawaiian Electric Companies	YouTube (https://www.youtube.com/watch?v=reKTqeBqGHg&feature=youtu.be)	10-Sep-15	Online video
Volunteers sought for Sept. 26 Hawaiian Garden improvements	Hanley, Celeste	Hawaii Army Weekly (http://www.hawaiiarmyweekly.com/2015/09/21/volunteers-sought-for-sept-26-hawaiian-garden-improvements/)	21-Sep-15	News article
National Public Lands Day engages volunteers, aids SB Hawaiian Interpretive gardens	Hanley, Celeste	Hawaii Army Weekly (http://www.hawaiiarmyweekly.com/2015/10/01/national-public-lands-day-engages-volunteers-aids-sb-hawaiian-interpretive-gardens/)	01-Oct-15	News article
Episode 45: Featured Species <i>Drosophila</i>	Magnacca, Karl	U.S. Fish and Wildlife Service Featured Species (https://www.fws.gov/endangered/about/ep_45_2015.html)	08-Oct-15	Online article
Army, State Take to the Skies, Summit to Protect Native Species	Gutierrez, Stefanie; Dennison, Dan	State of Hawaii Newsroom (http://governor.hawaii.gov/newsroom/latest-news/u-s-army-dlnr-news-release-army-state-take-to-the-skies-summit-to-protect-native-species/)	25-Feb-16	Joint news release
Our State Flower is Endangered	Jade Moon	Midweek	Apr-16	News article
SB, IPC Earth Day celebrates wonders of the planet	Christine Cabalo	Hawaii Army Weekly (http://www.hawaiiarmyweekly.com/2016/04/29/sb-ipc-earth-day-celebrates-wonders-of-the-planet/)	29-Apr-16	News article

Ecosystem Management Program Bulletin

During this reporting period, the outreach staff edited, produced and distributed the Ecosystem Management Program (EMP) Bulletin, a newsletter highlighting achievements made by the Army Environmental Division's Conservation Branch on Oahu and Hawaii islands. While traditionally the bulletin had been published four times annually, staff have increased the number of articles per issue and reduced the overall number of issues annually to two.

- Volume 60, Issue 4 – Techniques
 - https://issuu.com/oanrp/docs/emp_bulletin_vol_60_issue_4_techniq

The EMP is posted online at http://manoa.hawaii.edu/hpicesu/dpw_emb.htm and at www.issuu.com/oanrp. It is also distributed to a comprehensive list of state, non-profit federal and educational institutions and OANRP volunteers. Articles from this publication are frequently picked up by other Army publications. A hard copy of the bulletin is also provided to the University of Hawaii at Manoa Hamilton Library.

Volunteer Recognition

Several volunteers will be eligible to receive the President's Volunteer Service Award for FY2016 at the end of September 2016, when outreach staff report their service hours to the Corporation for National and Community Service.

Four volunteers earned the President's Volunteer Service Award in FY2015. The table below summarizes these awards. Volunteers who contributed 40 or more hours in FY 2015, including the Presidential awardees, were honored with an interpretive hike and volunteer service opportunity within MMR on May 17.

2015 President's Volunteer Service Awardees

Award Level	Name	Hours of Service in FY2015
Silver	Elaine Mahoney	443.25
Silver	David Danzeiser	439.5
Silver	Roy Kikuta	280
Bronze	Kathy Altz	215

Grants

OANRP was selected as an awardee of the 2015 National Public Lands Day Department of Defense Legacy Award, receiving \$6,500.00 in grant money towards the improvement of the Schofield Barracks Native Hawaiian Interpretive Garden. The majority of funds were utilized to purchase materials to construct a new shelter within the garden to protect visiting groups from rain and sun. Funding was also allotted for the replacement of aging interpretive signage and the purchase of tools for weeding and planting in the garden. The work project took place on two main days, September 26 and November 21, with four smaller workdays to complete the painting and assembly of the shelter.

Students from Hale Kula Elementary School enjoy a visit to the Schofield Barracks Native Hawaiian Interpretive Garden under the newly-constructed shelter, funded by the 2015 National Public Lands Day Department of Defense Legacy Award.

