

DEPT. COMM. NO. 54

DAVID Y. IGE
GOVERNOR OF
HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKO A. KALUHIWA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAIHOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

December 1, 2016

The Honorable Ronald D. Kouchi,
President
and Members of the Senate
Twenty-Eighth State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Joseph M. Souki, Speaker
and Members of the House of
Representatives
Twenty-Eighth State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Souki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Relating To The Natural Area Reserves System, Natural Area Partnership Program And The Financial Condition of the Natural Area Reserve Fund report, as required by Section 195-6.6, Hawaii Revised Statutes (HRS). In accordance with Section 93-16, HRS, a copy of this report has been transmitted to the Legislative Reference Bureau and the report may be viewed electronically at <http://dlnr.hawaii.gov/reports/>.

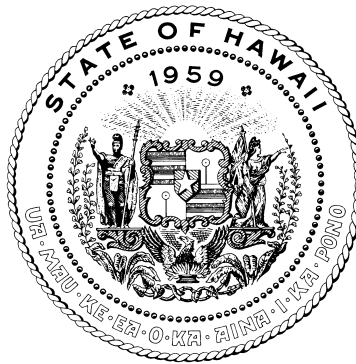
Sincerely,

A handwritten signature in black ink, appearing to read "Suzanne Case".

SUZANNE CASE, Chair
Board of Land and Natural Resources

**REPORT TO THE TWENTY-NINTH LEGISLATURE
STATE OF HAWAII
2017 REGULAR SESSION**

**RELATING TO THE NATURAL AREA RESERVES SYSTEM,
NATURAL AREA PARTNERSHIP PROGRAM,
AND
THE FINANCIAL CONDITION OF THE
NATURAL AREA RESERVE FUND**



PREPARED BY

**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE**

IN RESPONSE TO SECTION 195-6.6, HAWAII REVISIED STATUTES

**HONOLULU, HAWAII
OCTOBER 2016**



Native Ecosystem Protection and Management Section (LNR 407)

The Native Ecosystem Protection and Management Section of the Division of Forestry and Wildlife (LNR 407) includes the Natural Area Reserves System, Natural Area Partnerships Program, Watershed Partnerships Program, Rare Plant Program, Hawai'i Invertebrate Program and Information and Education Program. LNR 402 also supports these programs. These programs protect Hawaii's native ecosystems and unique plants and wildlife - Hawaii's cultural and natural heritage. Forested watersheds provide Hawaii's fresh water, and reduce erosion and flooding. Protecting these resources is critical for our islands' economy, as well as the health of its people. Summaries and maps of notable accomplishments in FY16 are listed below.



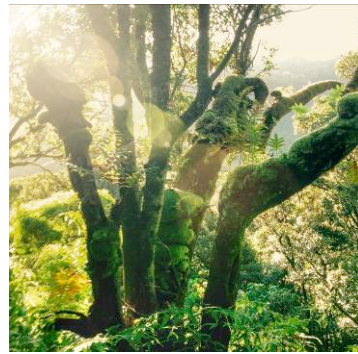
150,291
acres protected
from hooved
animals



52,329
trees and shrubs
planted



60,000
hours of youth
intern service
contributed



38,554
acres of invasive
plant control



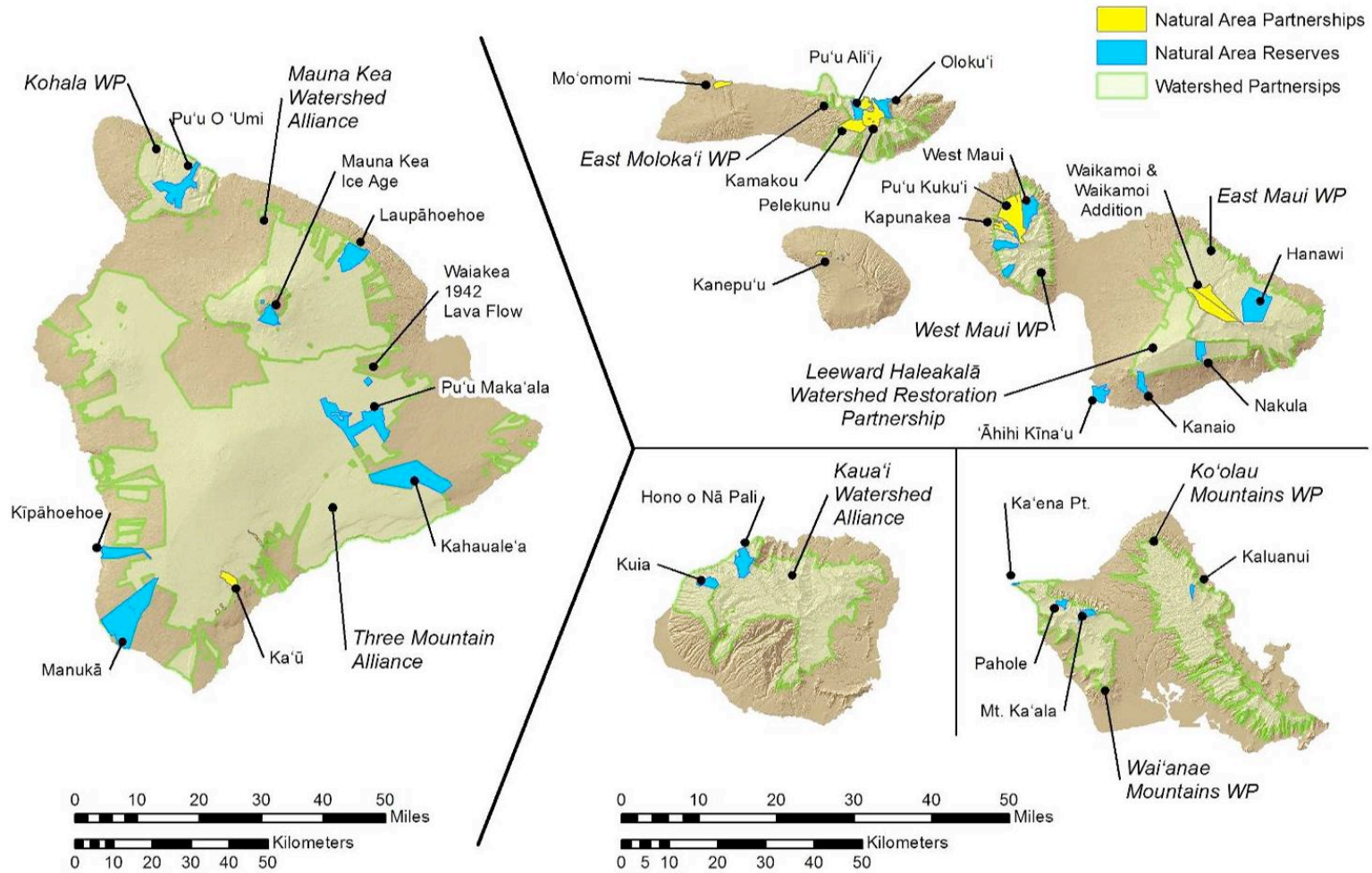
15,579
volunteer hours
donated



30
reserves and
preserves
managed



Natural Area Reserves, Natural Area Partnerships, and Watershed Partnerships

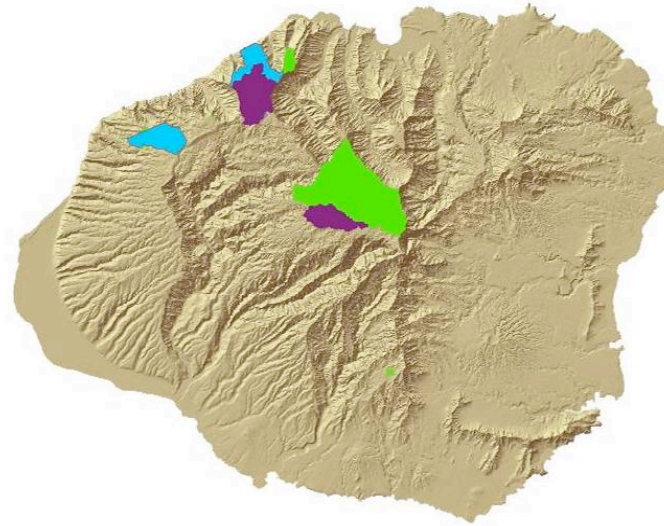




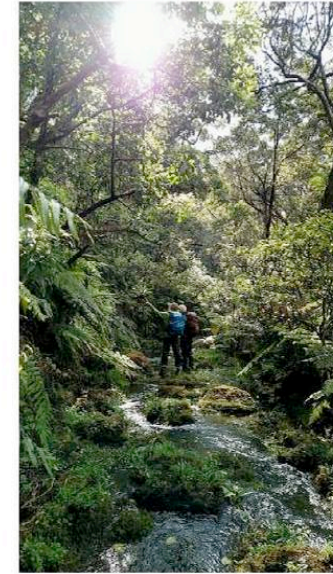
Kaua'i Natural Area Reserves and Watershed Programs (LNR 407)



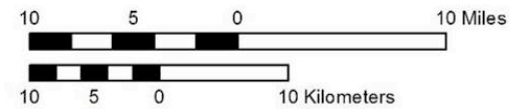
Checking condition of the Halehaha fence.



-  Capital Improvement Projects
-  Natural Area Reserves
-  Watershed Partnership Projects



Surveys and monitoring in remote Alakai.





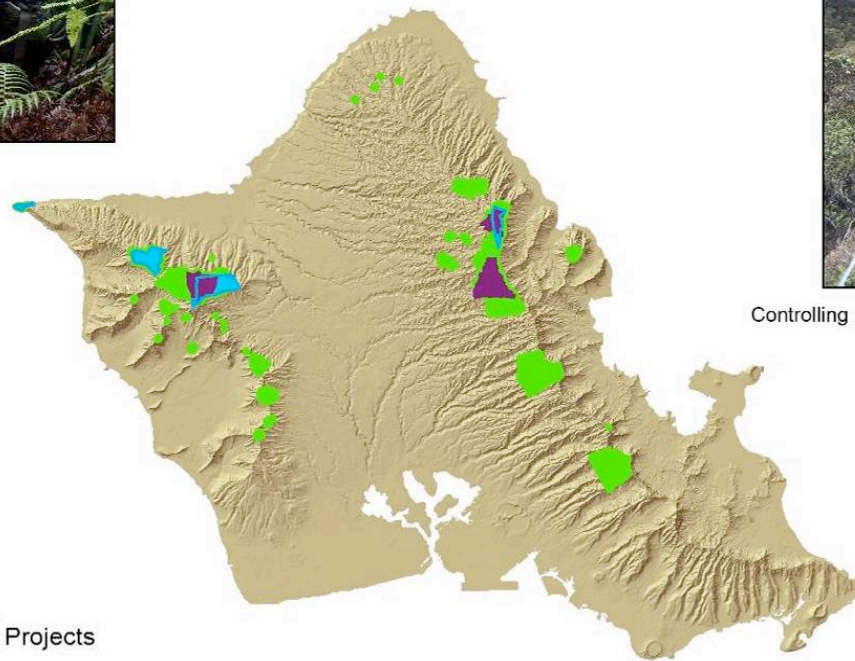
O'ahu Natural Area Reserves and Watershed Programs (LNR 407)



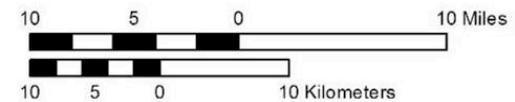
Australian tree fern control.



Controlling invasive plants along N. Poamoho fence.



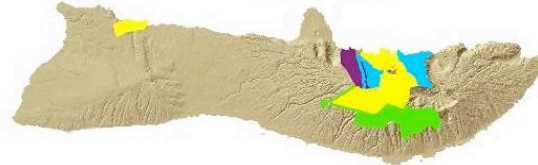
-  Capital Improvement Projects
-  Natural Area Reserves
-  Watershed Partnership Projects





Maui Nui Natural Area Reserves and Watershed Programs (LNR 407)

Moloka'i



Botanical survey in Kaluaaha, Molokai.

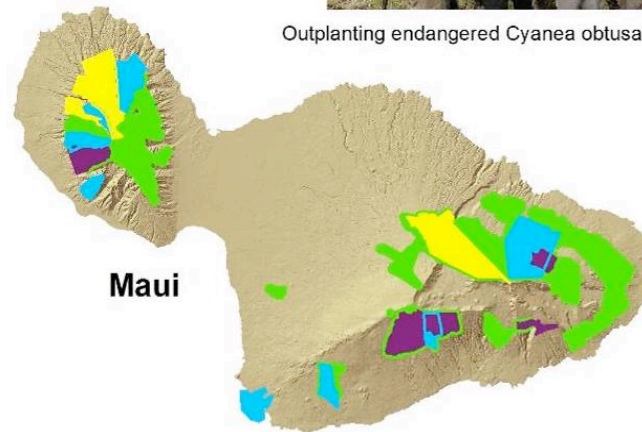


Outplanting endangered *Cyanea obtusa* at Kahikinui, Maui.

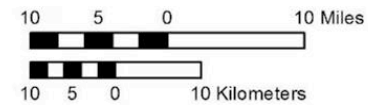
Lāna'i



Maui



-  Capital Improvement Projects
-  Natural Area Reserves
-  Natural Area Partnerships
-  Watershed Partnership Projects

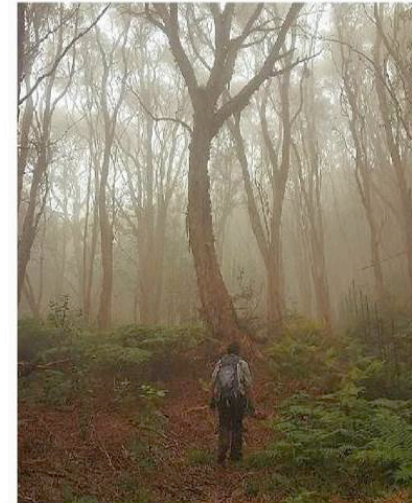




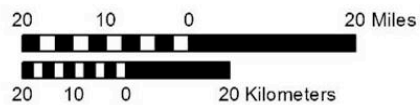
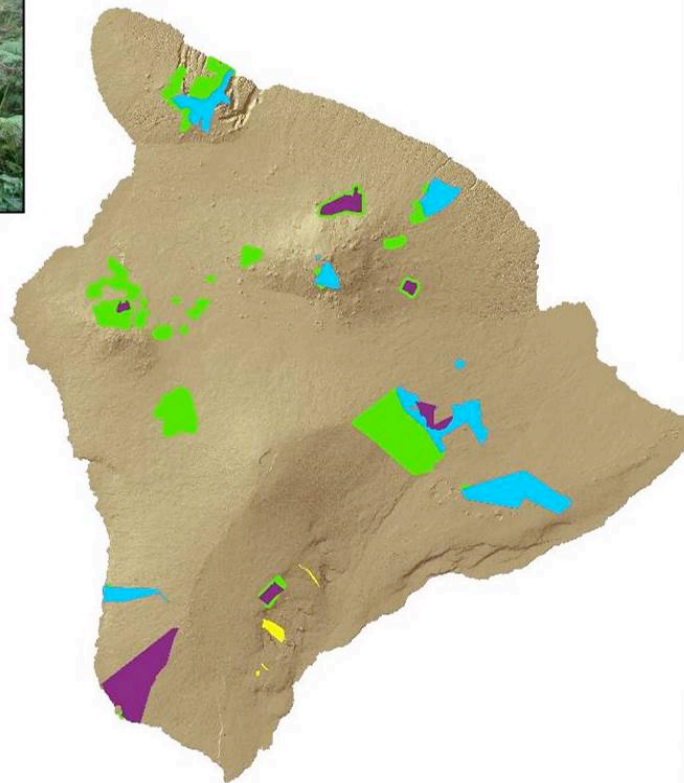
Hawai'i Natural Area Reserves and Watershed Programs (LNR 407)



Pu'u Pili unit on Kohala Mountain



Ungulate monitoring in Ka'u forest



- Capital Improvement Projects
- Natural Area Partnerships
- Natural Area Reserves
- Watershed Partnership Projects

**REPORT TO THE TWENTY-NINTH LEGISLATURE
2017 REGULAR SESSION**

**RELATING TO THE NATURAL AREA RESERVES SYSTEM,
NATURAL AREA PARTNERSHIPS PROGRAM
AND
THE FINANCIAL CONDITION OF THE
NATURAL AREA RESERVE FUND**

Section 195-6.6, Hawai‘i Revised Statutes (HRS), requires an annual comprehensive status report on the Natural Area Reserves System (NARS), the Natural Area Partnership Program (NAPP) and the financial condition of the Natural Area Reserve Fund (NARF). This report also covers other programs within LNR 407, including the Watershed Partnership Program, Hawai‘i Invertebrate Program, Rare Plant Program, Youth Conservation Corps, and other outreach.

Governor Ige 30% by 2030 Watershed Forest Goal

On September 1, 2016, Governor Ige announced to the global conservation community an ambitious goal to protect 30% of watershed forests by 2030. Protecting native forests is a critical tool for adapting to climate change’s drying effects, and will make Hawai‘i more resilient in extreme weather events by reducing landslides, flooding, and runoff. Because forest losses result in high costs for Hawaii’s economy, people, and unique plants and wildlife, the Department of Land and Natural Resources (DLNR) has elevated watershed protection as its top priority. The DLNR is nearly on track to meet its target to protect 30% of watershed forests by 2030 (253,000 acres), but ongoing CIP funds are needed each year to stay on track toward this important goal.

Management Summary

The Natural Area Reserves System, Natural Area Partnerships, and Watershed Partnerships are programs that manage large tracts of land for native ecosystem and watershed health. The Rare Plant and Hawai‘i Invertebrate Programs direct resource management, monitoring, research, conservation, and policy relating primarily to federally-listed Threatened and Endangered (T&E) and otherwise rare native invertebrate or plant species.

The many programs of LNR 407 provide on-the-ground protection to native plants, wildlife, ecosystems, and watersheds by fencing and controlling feral hooved animals such as cattle, sheep, deer and pigs; controlling other invasive species (weeds, non-native mammalian predators); monitoring, planting; fire prevention and control; and maintenance of infrastructure. Outreach and volunteer projects increased the public’s appreciation of Hawaii’s unique natural resources.

1. Natural Area Reserves System

The statewide Natural Area Reserve System (NARS) was established to preserve in perpetuity specific land and water areas which support communities, as relatively unmodified as possible, of the natural flora and fauna, as well as geological sites, of Hawai‘i. The system consists of 21 reserves on five islands, encompassing 123,810 acres of the State’s most unique ecosystems.

**Natural Area Reserve System (NARS)
FY16 Accomplishments Summary**

	Invasive plants search & control	Protected from hooved animals	Planting common and T&E species	Volunteer Contributions	Fence (new constructed)	Fence (existing maintained)
RESERVE	(acres)	(acres)	(number)	(hours)	(miles)	(miles)
Kauai						
Hono o Nā Pali	27.3	2,400.0				3.3
Kuia	103.5	129.0	2,271.0	391.0		4.1
Blue Hole (Forest Reserve)		18.0				0.2
O'ahu						
Pahole	22.4	650.0	3,000.0	1,506.0		7.0
Ka'ala	15.3	50.0	75.0	392.0	0.5	0.3
Ka'ena Point	3.8	65.0	169.0	580.0		0.3
Poamoho (BLNR Approved NAR)	31.1	636.0		164.0	1.3	4.6
Kaluanui					1.3	
Various other DOFAW Reserves	1.0		322.0	97.0	1.0	
Maui Nui						
'Āhihi-Kīna'u	10.0	626.0	1,280.0	1,251.0	1.1	3.0
Hanawi		6,411.0		32.0	2.3	12.0
Nakula	278.0	1,500.0	24,534.0	2,040.0	0.4	8.5
Kanaio	314.0	1,450.0	1,478.0	480.0		7.6
West Maui		5,461.0			0.1	3.5
Pu'u Ali'i		1,330.0				6.5
Oloku'i		1,620.0				0.1
Waikolu					3.2	
Hawai'i						
Mauna Kea Ice Age		3,894.0		8.0		0.8
Pu'u O 'Umi	113.9	2,421.9	261.0	40.0		10.0
Laupāhoehoe		17.1				1.1
Kahauale'a	2.8	153.7		144.0		2.8
Kīpāhoehoe	61.2	1,331.1	599.0			9.2
Pu'u Maka'ala	143.0	12,064.9	3,900.0		4.0	56.3
Manukā	15,147.9	8,459.4	600.0	244.0	9.6	23.8
Pu'u Wa'awa'a FR/Forest Bird Sanctuary	93.8	3,872.0	411.0	8.0		19.0
Koai'a Corridor Tree Sanctuary	222.4	222.4	4,493.0	16.0		2.9
TOTAL	16,591.4	50,126.5	43,318.0	4,929.0	24.7	186.8

In addition to the table above, notable NARS accomplishments include:

- Installed a weatherport shelter within the Hono O Nā Pali NAR, and collaborated to protect four seabird nesting sites as mitigation for the Kauai Island Utility Cooperative (Kauai).
- Assisted with the acquisition of upper Waimea and Poamoho Dole parcels (O‘ahu).
- Actively participated in the DLNR Ka‘ena Point Stewardship Group (O‘ahu).
- In just two years, pig removal in Hanawi NAR has resulted in a five-fold reduction in the percent of understory damaged by pigs (Maui).



Two year old native forest planted in what were previously invasive grasslands at Nakula NAR on Maui.

- Offered 27 public hunts to assist with removal of pigs, goats, and deer within a fenced unit in Kanaio NAR (Maui).
- Finished construction of Makai Unit fence and removed goats from 626 acres in ‘Āhihi-Kīna‘u NAR (Maui).
- The Natural Area Reserves System would like to express gratitude and recognition for the late Senator Kahele, who was actively involved in the protection of the NARS, particularly in Manukā, South Kona. Construction of a CIP fence continues, and will protect the largest remaining dryland forest in the state (Hawai‘i).

The Natural Area Reserves System is guided by a Strategic Plan as well as the NARS Commission, a thirteen-member advisory body to the DLNR under Section 195-6, HRS. This Commission met three times in FY16, to recommend new Natural Area Reserves, approve special use permits, management plans, revise the NARS rules, and temporarily close certain areas for human safety.

Plans and Management Objectives for FY17

The NARS will continue with the efforts listed above, and looks forward to the following milestones in FY17:

- Complete the Hono O Nā Pali NAR fence and scout for additional fences in Honopū, Kuia, Blue Hole, and a makai section along the Nā Pali (Kauai).
- Complete construction of the Kaluanui and South Poamoho fences (O‘ahu).
- Continue to monitor and remove predators within and adjacent to the Ka‘ena Point Predator Proof Fence, and monitor seabird population recovery, and retrofit fence with new gates and hood (O‘ahu).
- Complete a fence along Waikolu Valley in Moloka‘i Forest Reserve (Moloka‘i).
- Complete construction of new Kanahena parking lot and fee collection system in ‘Āhihi-Kīna‘u NAR (Maui).
- Complete the final phase of the Capital Improvement Project-funded Manukā boundary fence (Hawai‘i).

2. Natural Area Partnership Program (NAPP)

This innovative Program manages natural resources on 32,520 acres of private lands permanently dedicated to conservation. State funds are matched on a 2:1 basis with private funds. NAPP complements the existing NARS by providing long-term protection, financial support, and management to protect and restore unique natural resources on private lands.

Natural Area Partnership Program (NAPP) FY16 Accomplishments Summary

	Invasive non-native plant search and control	Areas protected from hooved animals	Plantings (trees, shrubs and T&E species)	Volunteer Contributions	Fence (new constructed)	Fence (existing maintained)
PRESERVE	(acres)	(acres)	(number)	(hours)	(miles)	(miles)
Moloka‘i						
Kamakou	5,345.4	7,736.2		500.5		14.2
Mo‘omomi	9.6	175.0		673.5	1.5	5.1
Pelekunu		11,900.1		227.0		
Maui						
Pu‘u Kukui	407.0	8,824.0	400	906.0	0.1	7.0
Waikamoi	115.0	5,954.0				9.8
Waikamoi Addition		969.0				3.5
Kapunakea	73.3	1,232.0		6.5		1.2
Lana‘i						
Kanepu‘u	16.8	346.0		765.5		8.1
Hawai‘i						
Ka‘ū	59.2	2,000.0	162	452.0	2.9	11.5
TOTAL	6,026.3	39,136.3	562	3,531.0	4.5	60.4

In addition to the table above, notable NAPP accomplishments include:

- Installation of an innovative 175-acre predator-proof fence in Mo‘omomi, on the north shore of Moloka‘i. This higher level of protection is another step forward in the astounding success story of the wedge-tailed shearwater seabird nesting colony, which grew from a single nest in 1999 to a thriving population of over 1,000 birds in 2016 – the result of long-term dedicated work by The Nature Conservancy (TNC) staff and community volunteers (Moloka‘i).
- Planting of 72 critically-endangered *Cyanea procera* in the newly pig-free Kamakou Preserve. This species had been considered extinct until a single plant was found. There are now over 300 of these *Cyanea* restored to their native forest (Moloka‘i).
- The 800-acre Maka‘ālia fence was finished at Ka‘ū (Hawai‘i).

NAPP plans and management objectives for FY17 are guided by Board of Land and Natural Resources-approved management plans, available at <http://dlnr.hawaii.gov/ecosystems/napp>.



Left: Lobelia gloria-montis at Puu Kukui Preserve. Above: Planting Cyanea procera in Kamakou Preserve. Photos: The Nature Conservancy

3. Compliance with Chapter 42F, HRS Requirements for Grants and Subsidies

Under NARS, no grants or subsidies were issued pursuant to Chapter 42F, HRS. Due to legislative amendments, Chapter 42F, HRS, is no longer applicable to the types of grants issued under NAPP. All grants awarded as part of NAPP are compliant with the State Procurement Code, Chapter 103D, HRS.

4. Status of Public Hunting Opportunities

Under NARS Management Policies, strategies to reduce populations of non-native animals to the lowest possible level are to be employed. Public hunting continues to be a control option in many areas within NARS, with most unfenced NARS lands now open to hunting every day with no bag limit. Hunting is not managed on a sustained-yield basis. Staff animal control (including fencing, trapping, staff hunting, snaring, and aerial shooting) are used as required in specified areas where public hunting is not able to reduce population/activity to the lowest possible level.

In NAPP Preserves, the public hunting opportunities vary:

- Mo‘omomi Preserve does not have public hunting due to safety concerns and limited resources for administration and enforcement.
- Kamakou Preserve is open for public hunting 365 days/year, with no bag limit. During extreme fire hazard, unsafe road conditions, aerial shooting, or herbicide spraying in accessible areas, portions or all of the Preserve may be closed.
- Pu‘u Kukui Preserve is open to public hunters by permit 365 days/year, with no bag limit.
- Waikamoi Preserve’s conservation easement allows ranch employees to hunt. Public hunters are permitted to hunt in portions of the Preserve when it does not interfere with management, guided hikes, and ranch employee hunting. The management goal is to remove all ungulates; approximately 50,000 acres of public hunting lands are available below the Preserve to meet public hunting needs.
- The new Waikamoi Addition was open to private hunting for about one year prior to TNC initiating ungulate control.
- Kapunakea Preserve’s conservation easement requires that there be no unaccompanied public hunting. The Preserve is closed to hunting with dogs due to snaring.
- In Kanepu‘u, TNC used volunteer hunts to remove deer from the fence units.
- TNC will continue to use volunteer hunters to reduce animal numbers in the Ka‘ū Preserve.

5. Watershed Partnerships Program

Watershed Partnerships are voluntary alliances of public and private landowners committed to protecting over 2 million acres of the most important watershed lands in Hawai‘i. These forests form the living sponge that allows millions of gallons of water to soak into the aquifers, providing a source of fresh water upon which all residents, tourists, agriculture and industry depend. There are currently 10 Watershed Partnerships involving over 70 private landowners and 24 public agencies. All partnerships have management plans approved by their members which guide their actions, providing clear objectives and measurable outcomes. Organizations and agencies compete for funding through an annual Request For Proposals, and State funds leverage Federal, County, and private monies on an approximately 1:1 basis.

**Watershed Partnerships Program
FY16 Accomplishments Summary***

	Invasive plants search & control	Protected from hooved animals	Volunteer contributions	Fence (new constructed)	Fence (existing maintained)
WATERSHED PARTNERSHIP (WP) / PROGRAM NAME	(acres)	(acres)	(hours)	(miles)	(miles)
Kaua'i					
Kaua'i Watershed Alliance	418.0	6,928.0		2.6	9.4
O'ahu					
Wai'anai Mountains Watershed Partnership	23.0		3,688.0		
Ko'olau Mountains Watershed Partnership	2,623.0	712.0	486.0		7.0
Maui Nui					
West Maui Mountains Watershed Partnership	298.0	5,618.0	1,516.0	1.2	8.0
Leeward Haleakalā Watershed Restoration Partnership	10,841.0	5,145.0	370.0	2.0	20.0
East Maui Watershed Partnership	114.0	6,003.0			7.0
East Moloka'i Watershed Partnership	382.0	**	153.0		**
Maui DOFAW		3,470.0			
Hawai'i					
Three Mountain Alliance	412.0	31,116.0	696.0		36.0
Kohala Watershed Partnership	496.0	1,511.0	210.0		16.0
Mauna Kea Watershed Alliance	329.0	525.0		1.0	7.0
TOTAL	15,936.0	61,028.0	7,119.0	6.8	110.4

**Due to the time required for contracting, this report summarizes activities that were carried out using FY15 funds, which largely occurred during FY16. The table includes only actions funded by the State Watershed Partnerships Program Grants; additional work is funded by federal, county and private funds.*

*** Included in the Kamakou NAPP table, page 10.*

In addition to the table above, notable Watershed Partnership accomplishments include:

- Completed the Northern Poamoho fence by the NARS and the Ko‘olau Mountains Watershed Partnership, with removal of pigs from this unit by staff and volunteer hunters (O‘ahu).
- Held educational and outreach events, from volunteer trips, community presentations, internships, youth programs, and watershed-themed art contests, such as the long-standing Malama Wao Akua held by the East Maui Watershed Partnership (Maui).
- Secured an agreement with the Department of Hawaiian Home Lands by the Mauna Kea Watershed Alliance for the long-term management of important watershed land at Waipahoehoe (Hawai‘i).
- Supervised an inmate conservation work line by the Three Mountain Alliance, overseeing a group from the Hawai‘i Community Correctional Center that inspected and repaired fences (Hawai‘i).

6. Rare Plant Program

The Rare Plant Program seeks to perpetuate the native flora of Hawai‘i, and is supported by general funds that match Federal funding primarily from Section 6 of the Endangered Species Act, and private funds.

Hawaiian Mid-Elevation Rare Plant Facilities

These propagation and storage facilities for rare native Hawaiian plant species function as part of a statewide network. They work to prevent extinction by 1) propagating plants for reintroduction into natural habitats, and 2) storing species for which there is no adequately protected habitat and to safeguard against extinction for those which have very few wild individuals remaining. Notable accomplishments in FY16 include:

- Propagation of 272 rare plant taxa at the four mid-elevation nurseries of Volcano (Hawai‘i), Pahole (O‘ahu), Olinda (Maui) and Kōke‘e (Kauai), with over 5,848 individuals out-planted back into natural habitats.
- Receipt of 149 separate collections representing 53 species by Lyon Arboretum Micropropagation Laboratory. The lab currently has an inventory of 27,839 collections.
- Addition of 384 new collections of seeds from 117 species by Lyon Seed Conservation Laboratory. A total of 2,472,283 seeds were deposited into the seed bank.

Plant Extinction Prevention (PEP) Program

This is the largest statewide T&E plant protection effort in Hawai‘i. To address the extinction crisis and focus efforts on the most critically-rare Hawaiian plants, the PEP Program implements recovery actions for the 238 species that number fewer than 50 individuals remaining in their natural habitats. Notable accomplishments in FY16 include:

- Implementation of actions to protect 193 Threatened, Endangered, and Proposed Endangered species and recover 147 PEP species.
- Collection of propagules from 74 PEP species and 40 other critically-rare species, with placement into ex-situ cultivation or storage at a cooperating Rare Plant Facility.
- Discovered new species and found some that had not been seen in decades.

- Reintroduction of 35 PEP species totaling 2,601 plants into protected habitat to establish new populations, a three-fold increase in planting from the previous year.



Plant Extinction Prevention botanist pollinating a Mauna Kea silversword (Argyroxiphium sandwicense subsp. sandwicense).



A new species in the coffee family with heart-shaped fruits was discovered: Coprosma cordicarpa. Less than 10 populations remain of this plant, located in Kanaio, Maui.

7. Hawai'i Invertebrate Program (HIP)

Hawaiian ecosystems are dependent upon the ecological services completed by a diverse assemblage of native invertebrate species, and HIP projects range from species-specific conservation to habitat-level restoration projects that broadly support invertebrate diversity. Addressing the ecological impacts of invasive pest species is also a high priority for the program. In FY16 the HIP program leveraged State funds at a ratio of 3:1.

Statewide Native Invertebrate Database and Online Permit System

An ecological, specimen level database has been developed to house both historical and contemporary invertebrate data. The database, as well as a permitting application tool, will soon be available to the public online as a result of collaboration with the Department of Business, Economic Development and Tourism. This is a product of the ETS-approved Infor database platform which supports streamlined online permitting and reporting across the State.

Native Invertebrate Captive Propagation Program

The first State Insectary Facility was established to propagate rare invertebrates for reintroduction into natural habitats, including our State Insect, the Kamehameha butterfly.

Projects conducted in collaboration with University of Hawai‘i at Mānoa researchers are:

- Pulelehua (Kamehameha Butterfly) Project.
- Yellow-faced Bee Captive Propagation Project.
- Yellow-faced Bee Nest Habitat Enhancement Project.
- Captive Rearing of the Orange-black Damselfly.



Like many pollinators, native yellow-faced bees in the genus Hylaeus, such as this Hylaeus anthracinus are declining across Hawai‘i. HIP projects are the first of their kind to target restoration and reintroduction for these important pollinator species. Photo: Jason Graham, UH Mānoa, Department of Plant and Environmental Protection Services.



Kāhuli or Hawaiian tree snails have beautiful shells and are famous in Hawaiian lore for their ability to sing. Unfortunately, they have been severely impacted by invasive predators, and now most species are threatened with extinction. Achatinella lila was recently reintroduced to its former range on O‘ahu from captive propagation efforts. This was the first time in history that a Hawaiian snail has been reintroduced to the wild. Photo: David Sischo, DOFAW-SEPP.

Snail Extinction Prevention Program (SEPP)

SEPP is a partnership between the Division of Forestry and Wildlife (DOFAW) and the U.S. Fish and Wildlife Service (USFWS), established to prevent the extinction of rare Hawaiian land snail species, and preserve the ecosystems upon which these species depend. Notable accomplishments in FY16 include:

- Establishment of a captive rearing facility to recover extremely rare snail populations.
- Maintenance of predator control and monitoring of 50 populations of rare and endangered snails in the Wai‘anae and Ko‘olau mountains on O‘ahu.
- Reintroduction of *Achatinella lila*, an endangered tree snail endemic to O‘ahu, back into its former range using captive propagation.
- Constructed four predator-proof structures on O‘ahu to protect endangered snails.
- Surveyed candidate endangered species on Lana‘i, Maui, and Hawai‘i, in conjunction with partners at the Bishop Museum, University of Hawai‘i and the USFWS.

8. Information and Education Program

The Information and Education program connects with communities across demographics and islands through press releases, community events, presentations, websites, social media, educator workshops, field trips, classroom visits, and youth internship programs.

Youth Conservation Corps (YCC) Program

YCC enables young adults to gain entry-level experience as they work with natural resource professionals. Internships often lead to future jobs or advanced degrees in natural resource management. Most of the state's YCC programs were funded by general funds and Federal and community grants awarded to the contractor, Kupu. The program mentored 30 year-round interns in addition to 15 weeks of project service learning for a number of teams throughout the summer program, and 5 summer interns. These individuals dedicated approximately 60,000 hours of service.

Project Learning Tree (PLT) Program

This is a national program that provides Hawaii's educators with locally- and nationally-relevant resources that connect to state standards. DOFAW uses PLT's standards-based, field tested materials. The PLT program completed 7 workshops with 68 educators (of which 15 were pre-service teachers at UH), with 11 new facilitators trained.

Other notable accomplishments of the Information and Education Program in FY16 include:

- On Kauai, staff led outreach events including Waimea Town Celebration, Makahiki Festival, Volunteer Outplanting Media Day, Banana Poka Festival and Ag Awareness Day, reaching 1,351 people. Staff made six school visits, and led activities such as science fair, career days, a Hawaiiana Day (where a mauka to makai wetland activity was conducted) and wedge-tailed shearwater outreach, reaching 1,327 people.
- O'ahu staff were involved in 18 community events, reaching over 3,600 college students, professors and community members. This included the annual State Farm Fair at Kualoa Ranch, Water Quality Monitoring Day, and several University of Hawai'i college and junior college fairs. Five presentations on wildlife prevention, forest ecology, health, stewardship and other local ecosystems and their biota were given to schools. Sixteen school service-trips were also led, reaching 1,470 people. Fifteen volunteer trips were led on public lands, involving 454 people in restoration work at locations such as Kawainui Marsh and Pahole Natural Area Reserve. Students also planted trees through the Adopt-A-Forest program.
- On Maui, staff trained and coordinated a crew of volunteers and interns to help educate public users of 'Āhihi-Kīna'u NAR about resources, historic sites and rules and assist with public interpretation and information activities, including a protect the reef campaign and sunblock campaign.
- Hawai'i led events such as Earth Day, BioBlitz at Hawai'i Volcanoes National Park and the annual Girl Scout Campout, reaching over 1,600 people, four school visits and six site visits. Staff also led lei workshops to engage participants while educating them about our natural and cultural heritage.

9. Analysis of the Problems and Issues Encountered

Act 84, Session Laws of Hawai‘i (SLH) 2015, repealed the conveyance tax as a funding source for the NARF, and authorized general funds for these programs. These programs are highly reliant on steady sources of funding. For instance, even a single year of budget cuts can undo decades of progress if fences are not maintained or invasive weeds are allowed to spread. Budget cuts can even result in the extinction of native Hawaiian species, which rely on active and sustained management. Consistent funding in the future remains a necessity. Act 84 expires at the end of FY17. The Department is seeking a new funding source during the 2017 Legislative session to continue these programs, and the 47 civil service staff and dozens of other jobs that now depend on Act 84 LNR407 general funds.

10. Financial Condition of the Natural Area Reserve Fund (NARF)

In FY16, general funds have replaced the NARF special funds. The NARF no longer has a spending ceiling nor receives conveyance tax revenues, pursuant to Act 84, SLH 2015. The unencumbered cash balance of the NARF is \$14,761,314.

11. Conclusion

Detailed project plans and accomplishment reports for NARS, NAPP, Watershed Partnership Program, Rare Plant Program, HIP and YCC are available through links from DOFAW website <http://dlnr.hawaii.gov/ecosystems/> or from the DLNR/DOFAW Native Ecosystem Section Manager at Emma.Yuen@hawaii.gov or (808) 587-4170.



Oloku‘i Natural Area Reserve, Moloka‘i