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DAVID TAYLOR, P.E. Director GLADYS C.BAISA Deputy Director

DEPARTMENT OF WATER SUPPLY DE LONGR COUNTY OF MAUI

200 SOUTH HIGH STREET WAILUKU, MAUI, HAWAII 96793-2155 www.mauiwater.org

August 29, 2017

Honorable Alan M. Arakawa Mayor, County of Maui 200 South High Street Wailuku, Hawaii 96793

For Transmittal to:

ALAN M. ARAKAWA

Mayor

Honorable Alika Atay Chair, Water Resources Committee Maui County Council 200 S. High Street Wailuku, Maui, HI 96793

### SUBJECT: GRANT MONITORING AND EVALUATION FOR DEPARTMENT OF WATER SUPPLY FISCAL YEAR 2017 WATERSHED PROTECTION GRANTS PROGRAM

Pursuant to Section 3.36.120(B) Maui County Code, please find attached the Watershed Protection Grants Program Accomplishment Report for Fiscal Year 2016 and 2017, including an explanation of our benchmarking procedure to evaluate grantee performance for both years. Please refer to our August 10, 2017 letter, attached, which addresses grant status and benchmarking for Fiscal Year 2016.

It should be pointed out that for Fiscal Year 2017, contracting delays at the University of Hawaii (UH), Office of Research Services (ORS), forced many of our grantees to decelerate normal operations. Although contracting issues have now been resolved, grantees have fallen several months behind schedule. Also, beginning in Fiscal Year 2016, grantees continue to face an unusually large staffing turnover rate. Understaffed project issues will likely persists into Fiscal Year 2017 further exacerbating logistical and field work problems caused by the major Maui storms of late 2016.

We are hopeful that all grantees will be back to normal operations soon to attain the intended results and meet contracted deliverables. It will not be until late 2017 that we will have sufficient expenditure and project deliverable information to finalize the grant report. The status of grants for Fiscal Year 2017 is as follows:

"By Water All Things Find Life"

- 1. East Maui Watershed Partnership University of Hawaii (EMWP UH: Currently benchmarking performance
- East Maui Watershed Partnership (Waikamoi Source Protection and Waikamoi Watershed Preserve Management) The Nature Conservancy (EMWP – TNC): Currently benchmarking performance
- 3. Leeward Haleakala Watershed Restoration Partnership University of Hawaii (LHWRP UH): Currently benchmarking performance
- 4. Honokowai and Wahikuli Source Protection (Kapunakea TNC) Currently benchmarking performance
- 5. West Maui Mountains Watershed Partnership –University of Hawaii (WMMWP UH): Currently benchmarking performance
- 6. Pu'u Kukui Watershed Preserve Tri-Isle Resource Conservation and Development Council (PKW Tri\_Isle RC&D): Currently benchmarking performance
- 7. East Molokai Watershed Partnership The Nature Conservancy (EMoWP TNC): Currently benchmarking performance
- 8. Maui Invasive Species Committee University of Hawaii (MISC UH): Currently benchmarking performance
- 9. Hawaii Agriculture Research Center (HARC): Final report and all deliverables have been met. Currently benchmarking performance
- 10. Auwahi Forest Restoration Project (AFRP): Currently benchmarking performance

## Process and Benchmarking

Proposals are generally evaluated based on whether they meet DWS goals, if they include a pre-existing management plan that's economically feasible, and if goals are realistic, amongst other evaluation criteria highlighted in our Request for Proposal (RFP). Once a grant is accepted and funding is awarded to a grantee, grantees are required to provide four (4) separate quarterly reports from each quarter of a fiscal year. Along with the detailed contents of the reports to see if grantees satisfied their contracted scope of work, there are five (5) main benchmarking categories.

Key benchmarks are used to determine the overall performance of each grantee after each performance period. These key performance benchmarks are as follows:

1. Administrative benchmarks: DWS refers back to the designated evaluation criteria established in the RFP shown below.

EVALUATION CRITERIA	*MAX. POINTS
Degree to which the public uses and benefits from subject project to protect or enhance drinking water supply and provide public education opportunities	25

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Cost to benefit ratio; projects that have significant potential to protect or enhance water supply and quality per grant dollar; and the plan to tackle the complexity of the project	20
Ability to administer and manage DWS grants efficiently and diligently including: • Program efficiency to optimize use of funds and reduce costs • Financial reporting	15
Ability to complete deliverables and complete projects timely within a planned scope of work, including project performance history	15
Project improvement over the last three (3) years	15
Matching/leveraged funds obtained from other sources as part of the current proposal or a proposal approved in FY 2017	5
Quality and completeness of the application package	5

- 1. Deliverables benchmarking: Each grantee is responsible for deliverables under their contract. We examine how proposed deliverables are met based on quarterly reports. These deliverables may be any of the follow tasks:
  - 1. Ungulate control
  - 2. Weed control
  - 3. Invasive plant control
  - 4. Resource monitoring/research
  - 5. Community outreach
  - 6. Research, germination, and planting
- 2. Expenditure benchmarking: Each quarterly report is accompanied by quarterly invoices and contains details on expenditures related to accomplishing deliverables. Agreements within each grantees signed contract and the DWS general terms and conditions provide the specific and general budgetary guidelines and rules to follow. We expect all of our grantees to comply and be fiscally responsible.

Expenditures are broken down to several categories. In FY 2016 and FY 2017, these categories were:

- A. Payroll costs
- B. Transportation costs
- C. Contractual services costs
- D. Utilities costs
- E. Travel costs
- F. Field crew costs
- G. Supplies and materials costs

H. Administrative and overhead costs

- I. Other costs
- 3. Due diligence benchmarking: Every grantee is expected to follow their agreed upon contract and the DWS general terms and conditions. With a limited DWS staff, it is vitally important for each grantee to administer and manage their field work and administration thoroughly by communicating information and requests to decision makers within their organization first.
- 4. Reporting benchmarking: Reporting quality matters because it provides the necessary details needed to answer questions about how deliverables were executed, if there were unforeseeable limitations and constraints, and why expenditures are ultimately justified. It also shows how much time and effort was taken by the grantee to be thorough and transparent about their project.

Improvements have since been made to our fiscal year 2018 grants application and RFP to better collect data on project performances and streamline reporting.

Should you have any questions, please feel free to contact me at ext. 7816.

Sincerely,

DAVID TAYLOR, P.E. Director of Water Supply

cc: Gladys C. Baisa, Deputy Director

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ALAN M. ARAKAWA Mayor



DAVID TAYLOR, P.E. Director

GLADYS C. BAISA Deputy Director

DEPARTMENT OF WATER SUPPLY COUNTY OF MAUI 200 SOUTH HIGH STREET WAILUKU, MAUI, HAWAII 96793-2155 www.mauiwater.org

August 10, 2017

Honorable Alan M. Arakawa Mayor, County of Maui 200 South High Street Wailuku, Hawaii 96793

For Transmittal to:

Honorable Alika Atay Chair, Water Resources Committee Maui County Council 200 South High Street Wailuku, Hawaii 96793

Dear Chair Atay:

#### SUBJECT: STATUS OF GRANTS UNDER THE DEPARTMENT OF WATER SUPPLY AND BENCHMARKS FOR GRANTEE PERFORMANCE (WR-9)

Thank you for your July 21, 2017 letter regarding status of grants and benchmarks for grantee performance in accordance with Maui County Code Section 3.36.120.

Grants appropriated under the Department of Water Supply (DWS) are evaluated over a one-year performance period starting upon the grantee's receipt and acknowledgement of a dated Notice to Proceed (NTP) letter. For Fiscal Year 2016, NTP and performance periods for all grantees administered by University of Hawai'i Office of Research Services were delayed into late Fiscal Year 2017 in order for grantees to resolve indemnification of the County of Maui. The status of grants for Fiscal Year 2016 is as follows:

- 1. East Maui Watershed Partnership University of Hawaii (EMWP UH: Final report and all deliverables are met. Currently benchmarking performance.
- East Maui Watershed Partnership (Waikamoi Source Protection and Waikamoi Watershed Preserve Management) The Nature Conservancy (EMWP – TNC): Final report and all deliverables are met. Currently benchmarking performance.
- 3. Leeward Haleakala Watershed Restoration Partnership University of Hawaii (LHWRP UH): Waiting on Final Report.
- 4. West Maui Mountains Watershed Partnership University of Hawaii (WMMWP UH): Waiting on final report.
- 5. Pu'u Kukui Watershed Preserve Tri-Isle Resource Conservation and

Honorable Alika Atay Chair, Water Resources Committee August 10, 2017 Page 2

Development Council (PKW Tri-Isle RC&D): Final report and all deliverables are met. Currently benchmarking performance.

- 6. East Molokai Watershed Partnership The Nature Conservancy (EMWP TNC): Final report and all deliverables have been met.
- 7. Maui Invasive Species Committee University of Hawaii (MISC UH): Final report and all deliverables are met. Currently benchmarking performance.
- 8. Hawaii Agriculture Research Center (HARC): Final report and all deliverables have been met.
- 9. Auwahi Forest Restoration Project University of Hawaii (AFRP UH): Waiting for final report.

#### PROCESS AND BENCHMARKING

Proposals are generally evaluated based on whether they meet DWS goals, if they include a pre-existing management plan that's economically feasible, and if goals are realistic, amongst other evaluation criteria highlighted in our Request for Proposal (RFP). Once a grant is accepted and funding is awarded to a grantee, grantees are required to provide four (4) separate quarterly reports from each quarter of a fiscal year. Along with the detailed contents of the reports to see if grantees satisfied their contracted scope of work, there are five (5) main benchmarking categories. Key benchmarks are used to determine the overall performance of each grantee after each performance period. These key performance benchmarks are as follows:

1. Administrative benchmarks: DWS refers back to the designated evaluation criteria established in the RFP and shown below.

EVALUATION CRITERIA	*MAX. POINTS
Degree to which the public uses and benefits from subject project to protect or enhance drinking water supply and provide public education opportunities	25
Cost to benefit ratio; projects that have significant potential to protect or enhance water supply and quality per grant dollar; and the plan to tackle the complexity of the project	20
Ability to administer and manage DWS grants efficiently and diligently including: • Program efficiency to optimize use of funds and reduce costs • Financial reporting	15
Ability to complete deliverables and complete projects timely within a planned scope of work, including project performance history	15
Project improvement over the last three (3) years	15
Matching/leveraged funds obtained from other sources as part of the current proposal or a proposal approved in FY 2017	5
Quality and completeness of the application package	5

Honorable Alika Atay Chair, Water Resources Committee August 10, 2017 Page 3

- 2. Deliverables benchmarking: Each grantee is responsible for deliverables under their contract. We will examine how their proposed deliverables were met based on quarterly reports. These deliverables may be any of the follow tasks:
  - 1. Ungulate control
  - 2. Weed control
  - 3. Invasive plant control
  - 4. Resource monitoring/research
  - 5. Community outreach
  - 6. Research, germination, and planting
- 3. Expenditure benchmarking: Each quarterly report is accompanied by quarterly invoices and contains details on expenditures related to accomplishing deliverables. Agreements within each grantees signed contract and the DWS general terms and conditions provide the specific and general budgetary guidelines and rules to follow. We expect all of our grantees to comply and be fiscally responsible.

Expenditures are broken down to several categories. In FY 2016 and FY 2017, these categories were:

- A. Payroll costs
- B. Transportation costs
- C. Contractual services costs
- D. Utilities costs
- E. Travel costs
- F. Field crew costs
- G. Supplies and materials costs
- H. Administrative and overhead costs
- I. Other costs
- 4. Due diligence benchmarking: Every grantee is expected to follow their agreed upon contract and the DWS general terms and conditions. With a limited DWS staff, it is vitally important for each grantee to administer and manage their field work and administration thoroughly by communicating information and requests to decision makers within their organization first.
- 5. Reporting benchmarking: Reporting quality matters because it provides the necessary details needed to answer questions about how deliverables were executed, if there were unforeseeable limitations and constraints, and why expenditures are ultimately justified. It also shows how much time and effort was taken by the grantee to be thorough and transparent about their project.

Improvements have since been made to our grants application and RFP to better collect data on project performances and streamline reporting.

Honorable Alika Atay Chair, Water Resources Committee August 10, 2017 Page 4

We hope you find this information helpful. Should further clarification be necessary, please feel free to contact me at ext. 7816

Sincerely,

DAVID TAYLOR, P.E. Director of Water Supply

Attachment xc: Gladys C. Baisa, Deputy Director DT:EB:atn P:\DOCS\Council\081017\_Atay(WR-9).doc



# COUNTY OF MAUI DEPARTMENT OF WATER SUPPLY



## WATERSHED PROTECTION GRANTS PROGRAM Accomplishment Report Fiscal Year 2016

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ATTACHMENT 1 – PROGRAM DATA SUMMARY

## **ATTACHMENT 2 – FINANCIAL SUMMARY**

## INTRODUCTION

DWS has taken a proactive role to ensure the protection and sustainability of our water sources by providing financial support to several highly capable watershed management partners and organizations experienced at protecting, preserving and conserving our water resources. Projects that comprehensively address threats to the department's water sources are considered for funding. For example, watershed protection grantees considers the effects of climate change and devotedly captures and eradicates, non-native, invasive, animals and plants responsible for loss of habitat and upland forests linked to water recharge, fog drip and source availability. Protecting our water absorbing watersheds is the most cost effective and efficient way to ensure that both surface and ground water supplies can be sustainably replenished.

Feral ungulates and invasive plants and weeds are some of the greatest threats to our watersheds. Scientific evidence show that feral animals not only eat native vegetation, but also trample and dig—all of which changes the landscape with the creation corridors which increases surface water run-off and allows non-invasive plants to invade and take root. Without efforts by our watershed protection grantees, less surface and ground water absorption for aquifer recharging will occur and non-native invasive plants may eventually outcompete native animals and plants for space, sunlight, water and nutrients. Other evidence also suggests that non-native plants and animals have the potential to alter soil chemistry, change fire regimes, affect soils stability, and consume more water.

DWS continues its critical role in watershed protection by funding active management, control and monitoring of non-native invasive plants and animals to preventing irreversible damage to Maui's watersheds.

From mid-1990s to date, the department provided a total of \$14.261M to the following organizations:

- East Maui Watershed Partnership University of Hawaii (EMWP UH)
- East Maui Watershed Partnership (Waikamoi Source Protection and Waikamoi Watershed Preserve Management) The Nature Conservancy (EMWP TNC)
- Leeward Haleakala Watershed Restoration Partnership University of Hawaii (LHWRP UH)
- Honokowai and Wahikuli Source Protection (Kapunakea TNC)
- West Maui Mountains Watershed Partnership –University of Hawaii (WMMWP –UH)
- Pu'u Kukui Watershed Preserve Tri-Isle Resource Conservation and Development Council (PKW Tri\_Isle RC&D)
- East Molokai Watershed Partnership The Nature Conservancy (EMoWP TNC)
- Maui Invasive Species Committee University of Hawaii (MISC UH)
- Hawaii Agriculture Research Center (HARC)

These watershed protection grantee partners work collaboratively with more than 54 private and public partners in an effort to protect hundreds of thousands of acres of vital forested watersheds.

### SUMMARY OF THE DWS WATERSHED PROTECTION GRANTS PROGRAM ACCOMPLISHMENTS BY ITS GRANTEE PARTNERS

Managed Watershed Area (Maui and Molokai)	249,362 acres
Fence Construction	131.99 miles
Forest Area Protected by Fencing	64,883 acres
Actively Managed Feral Ungulates Area	<75,000 acres
Feral Ungulates Removed (FY11-FY16)	(1,060 animals)
Actively Managed Invasive Species Area	119,500 area
Invasive Plant Species Removed (FY11-FY16)	>100,000
Native and Endangered Species Planted (FY11-FY16)	12,890
Leveraged Funds	\$3.6M
Grant-Funding Staff (from 15%-100% of salary)	18.2 FTE

### **Notable Research Work Being Undertaken**

- Research on the effects of restoration on hydraulic properties at Auwahi and other project sites by assessing the effects of reforestation on soil moisture dynamics and aquifer recharge.
- Cooperative studies to evaluate, assess and record the impacts of land-cover changes on groundwater recharge.
- Cooperation and knowledge exchange to establish a framework for evaluating the hydrologic effects of watershed restoration programs on the islands of Maui and Moloka'i.
- Establishment of locally adapted, *Fusarium oxysporum f.sp.koae* (koa wilt) resistant, koa seed orchards for distribution to various restoration and reforestation projects on Maui.
- Field surveying, access, and siting support for a USGS study to quantify the impacts of non-native forest species on freshwater availability in Maui.

#### **PROGRAM DATA SUMMARY - FISCAL YEAR 2016**

GRANTEE	ACREAGE MANAGED	MILES OF FENCE	UNGULATE CONTROL	INVASIVE/ WEED CONTROL	REVEGETATION	RESOURCE MONITORING	COMMUNITY OUTREACH
East Maui Watershed Partnership - UH	10,800 of 122,000 ac	7.7 EMWP + 37.3 partners = 45	45,000 ac - ungulate free 1,940 traps checked	14.6 ac surveyed - himalayan ginger			10 presentations/16 hikes/6 community events - 9,000+ participants 36 posts on social media - 1M hits and comments
The Nature Conservancy - Waikamoi Haipua'ena Source Protection Project	6,230 of 122,000 ac	19 mi	691.4 miles scouted 14 catches	91 ac swept for himalayan ginger, 73 ac swept - 1837 pine rees removed; 30 sq mtrs of gorse treated	190 natives outplanted by TNC and PEPP	installed and maintain 1 in-stream water quality device; rare plant mapping and restoration	104 hikes/17 service trips - 990 hiker/volunteers
Leeward Haleakala Watershed Restoration Partnership/ Auwahi Forest Restoration Project UH	- 16,706 ac	15 miles		10,505 ac controlled 2,292 invasive plants	12,700 native plants outplanted; collected 2,515,411 seeds; 250 fusarium resistant seedling collected to be used in restoration efforts	Erosion mitigation efforts on steep slopes at Nu'u Mauka	12 community -based restoration trips volunteers; 14 offsite events/presentations and guided tours - 775 participants; 9 native seedball making particpated by 1,814 students and made 11,480 seedballs to be deployed in the 2017-2018 planting season;
West Maui Mountains Watershed Partnership - UH	47,321 ac (14,282 DWS land)	26.5 (5.5 -DWS land)	29,962 ac- 5,326 traps checked /14 catches	Aerial survey using HBT - 73.6 ac; 44 targets were treated and will be re- assessed Ground survey - 29.39 ac; 1,517 plants removed	vegetation plots were established within and below the burn zone of the fire in 2007 - in some plots, vegetation has recovered up to 90% (natives most dominant)	to slow sediment transport. (right) Sediment logs installed as check dams to capture soil.	5 community events and outreach - 377 direct interactions; 138 posts - 26,542 views (19% returning and 81% new visitors to the site)
Pu'u Kukui Watershed Preserve - Tri-Isle RC&D	8600 ac	12.37	2,057 traps checked 23 pigs removed	63.83 ac surveyed - assisted in 6 inter agency invasive species removal	volunteers engaged in native planting projects, invasive plant removals, bushing fence lines	Once soils accumulate along a rock barrier or at the top of a sediment log, native seedlings can	12 rain gauge hikes /19 service trips/8 events/ 376 volunteers recruited
The Nature Conservancy - Honokowai and Wahikuli Source Protection Project	1264 ac	1.12 mi	163 miles scouted 1 catch	>32 acres scouted - ~254 plants removed		be planted to further stabilize the soils and re-establish leaf litter, soil moisture, and nutrient	
The Nature Conservancy - East Molokai Watershed Partnership	18,500 ac	13 mi	4,175 acres surveyed - 1000+ ungulates removed	10,653 acres surveyed - 11,189 individual plants removed		content.	20 hikes, 4 presentations, 2 events, meetings - >1,711 people engaged
Maui Invasive Species Committee - UH	119,500 ac			Aerial and ground survey (incl residential visits)- 23,000 ac invasive plants removed - 42,376			20 school -based activities/2 hikes/2 presentations - comprehensive outreach program reached 38,000 individuals
Hawaii Agriculture Research Center	10 ac			weed control focused on gorse, blaskberry and grasses	wilt resistant koa seeds processed, cleaned and collected from 70 mother trees for reforestation		

FINANCIAL SUMMARY - FISCAL YEAR 2016												a):	
GRANTEE	PAYROLL	TRANSPORTATION	CONTRACTUAL	UTILITIES	TRAVEL	FIELD CREW COSTS	SUPPLIES, MATERALS, EQUIPMENT	OTHER COSTS	Administrative and Overhead costs	Total Grant Amount	Funds Used	UNUSED FUNDS	FUNDS LEVERAGED
East Maui Watershed Partnership - UH	\$181,319.00		\$54,075.00	\$4,650.00	\$4,892.00		\$8,285.00	\$10,415.00	\$26,364.00	\$290,000.00	\$289,954.03	\$45.97	\$271,634.00
Leeward Haleakala Watershed Restoration Partnership - UH	\$142,952.00			\$7,485.00	\$6,800.00	\$4,000.00	\$9,803.00	\$28,960.00	\$20,000.00	\$220,000.00	\$164,427.64	\$55,572.36	\$330,004.00
West Maui Mountains Watershed Partnership - UH	\$209,838.00		\$25,000.00	\$5,150.00	\$2,000.00	\$5,000.00	\$9,676.00	\$4,700.00	\$26,136.00	\$287,500.00	\$258,558.53	\$28,941.47	\$667,954.00
Pu'u Kukui Watershed Preserve - Tri-Isle RC&D	\$99,000.00	\$15,000.00	\$42,525.00	\$2,000.00		\$7,400.00	\$10,000.00	\$4,075.00	\$20,000.00	\$200,000.00	\$172,364.96	\$27,635.04	\$975,023.00
The Nature Conservancy - Honokowai and Wahikuli Source Protection Project	\$23,455.00		\$42,727.00					\$2,000.00	\$6,818.00	\$75,000.00	\$74,738.91	\$261.09	\$80,000.00
The Nature Conservancy - Waikamoi Haipua'ena Source Protection Project	\$116,624.00		\$10,000.00				\$15,000.00	\$31,103.00	\$17,273.00	\$190,000.00	\$190,000.00	\$0.00	\$390,000.00
The Nature Conservancy - East Molokai Watershed Partnership	\$75,000.00		\$152,273.00						\$22,727.00	\$250,000.00	\$250,000.00	\$0.00	\$450,000.00
Maui Invasive Species Committee - UH	\$239,091.00								\$23,909.00	\$263,000.00	\$262,947.60	\$52.40	\$454,248.00
Hawaii Agriculture Research Center	\$31,000.00	\$1,000.00	\$25,000.00	\$1,000.00	\$3,500.00		\$1,500.00		\$7,000.00	\$70,000.00	\$49,110.30	\$20,889.70	\$70,000.00
TOTAL	\$1,118,279.00	\$16,000.00	\$351,600.00	\$20,285.00	\$17,192.00	\$16,400.00	\$54,264.00	\$81,253.00	\$170,227.00	\$1,845,500.00	\$1,712,101.97	\$133,398.03	\$3,688,863.00

PROCESSING DISENCUMBERED



# COUNTY OF MAUI DEPARTMENT OF WATER SUPPLY



# WATERSHED PROTECTION GRANTS PROGRAM Accomplishment Report Fiscal Year 2017

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### INTRODUCTION

DWS has taken a proactive role to ensure the protection and sustainability of our water sources by providing financial support to several highly capable watershed management partners and organizations experienced at protecting, preserving and conserving our water resources. Projects that comprehensively address threats to the department's water sources are considered for funding. For example, watershed protection grantees considers the effects of climate change and devotedly captures and eradicates, non-native, invasive, animals and plants responsible for loss of habitat and upland forests linked to water recharge, fog drip and source availability. Protecting our water absorbing watersheds is the most cost effective and efficient way to ensure that both surface and ground water supplies can be sustainably replenished.

Feral ungulates and invasive plants and weeds are some of the greatest threats to our watersheds. Scientific evidence show that feral animals not only eat native vegetation, but also trample and dig—all of which changes the landscape with the creation corridors which increases surface water run-off and allows non-invasive plants to invade and take root. Without efforts by our watershed protection grantees, less surface and ground water absorption for aquifer recharging will occur and non-native invasive plants may eventually out-compete native animals and plants for space, sunlight, water and nutrients. Other evidence also suggests that non-native plants and animals have the potential to alter soil chemistry, change fire regimes, affect soils stability, and consume more water.

DWS continues its critical role in watershed protection by funding active management, control and monitoring of non-native invasive plants and animals to preventing irreversible damage to Maui's watersheds.

From mid-1990s to date, the department provided a total of \$16.311M to the following organizations:

- East Maui Watershed Partnership University of Hawaii (EMWP UH)
- East Maui Watershed Partnership (Waikamoi Source Protection and Waikamoi Watershed Preserve Management) The Nature Conservancy (EMWP TNC)
- Leeward Haleakala Watershed Restoration Partnership University of Hawaii (LHWRP UH)
- Honokowai and Wahikuli Source Protection (Kapunakea TNC)
- West Maui Mountains Watershed Partnership –University of Hawaii (WMMWP –UH)
- Pu'u Kukui Watershed Preserve Tri-Isle Resource Conservation and Development Council (PKW Tri\_Isle RC&D)
- East Molokai Watershed Partnership The Nature Conservancy (EMoWP TNC)
- Maui Invasive Species Committee University of Hawaii (MISC UH)
- Hawaii Agriculture Research Center (HARC)
- Auwahi Forest Restoration Partnership University of Hawaii (AFRP UH)

These watershed protection grantee partners work collaboratively with more than 54 private and public partners in an effort to protect their designated project areas and beyond. The total area expands to hundreds of thousands of acres of vital forested watersheds.

## SUMMARY OF THE DWS WATERSHED PROTECTION GRANTS PROGRAM ACCOMPLISHMENTS BY ITS GRANTEE PARTNERS

Managed Watershed Area (Maui and Molokai)	249,362 acres
Fence Construction (pending update for FY17)	131.99 miles
Forest Area Protected by Fencing	64,883 acres
Actively Managed Feral Ungulates Area	<75,000 acres
Feral Ungulates Removed (FY11-FY17)	(1,470 animals)
Actively Managed Invasive Species Area	119,500 area
Invasive Plant Species Removed (FY11-FY17 - currently)	>30,000
Native and Endangered Species Planted (FY11-FY17)	Not yet available
Leveraged Funds	Not yet available
Grant-Funding Staff (from 15%-100% of salary)	Not yet available

#### **Notable Research Work Being Undertaken**

- Research on the effects of restoration on hydraulic properties at Auwahi and other project sites by assessing the effects of reforestation on soil moisture dynamics and aquifer recharge.
- Cooperative studies to evaluate, assess and record the impacts of land-cover changes on groundwater recharge.
- Cooperation and knowledge exchange to establish a framework for evaluating the hydrologic effects of watershed restoration programs on the islands of Maui and Moloka'i.
- Establishment of locally adapted, *Fusarium oxysporum f.sp.koae* (koa wilt) resistant, koa seed orchards for distribution to various restoration and reforestation projects on Maui.
- Field surveying, access, and siting support for a USGS study to quantify the impacts of non-native forest species on freshwater availability in Maui.
- Ways to avoid the spread of Rapid Ohia Death (ROD) and the ongoing application of bio-control for invasive species.

#### PROGRAM DATA SUMMARY - FISCAL YEAR 2017

GRANTEE	ACREAGE MANAGED	MILES OF FENCE INSTALLED	UNGULATE CONTROL	INVASIVE/ WEED CONTROL	REVEGETATION	RESOURCE MONITORING	COMMUNITY OUTREACH	
East Maui Watershed Partnership - UH	10,800 of 122,000 ac	7.7 EMWP + 37.3 partners = 45						no report submitted
The Nature Conservancy - Waikamoi Haipua'ena Source Protection Project	6,230 of 122,000 ac	19 mi						no report submitted
Leeward Haleakala Watershed Restoration Partnership/ Auwahi Forest Restoration Project - UH	16,706 ac	13 miles						no report submitted
Auwahi Forest Restoration Project	184 ac	2 miles						no report submitted
West Maui Mountains Watershed Partnership - UH	47,321 ac (14,282 DWS land)	26.5 (5.5 -DWS land)	inspected 1250 meters of fence; checked 363 traps; no captures	HBT - 27 targets were treated; ground survey- 13.9 ac, 1282 plants controlled		continue to observe forest health and monitor for early detection and response	30 Facebook posts - 1029 likes; website, 2290 sessions with 3354 views; 3 presentations 2 waterstory (44 students);1 event	1 report
Pu'u Kukui Watershed Preserve - Tri-Isle RC&D	8600 ac	12.37	25 meters of fence installed, 555 meters fence checked, 2345 traps checked, removed 121 pigs removed	9.6 ac surveyed, 78 plants removed; 2 transects completed		monthly rainfall data collected	3 rain gauge hikes;9 service trips, 52 volunteers	1 report
The Nature Conservancy - Honokowai and Wahikuli Source Protection Project	1264 ac	1.12 mi	938 traps checked; 84 miles scouted no ungulate sign	15.4 ac surveyed - over 1,000 plants removed	-	six additional transects stations were added; 2 vegetation plots were read		
The Nature Conservancy - East Molokai Watershed Partnership	18,500 ac	13 mi	13.31 miles surveyed - 1365 ungulates removed	11,000 ac surveyed; removed over 30,000 plants			conducted hikes, meetings and events; 552 volunteers/ participants	
Maui Invasive Species Committee - UH	119,500 ac*							no report submitted
Hawaii Agriculture Research Center	10 ac			weed control focused on gorse, blaskberry and grasses	continues to establish and maintain a network of wilt resistant koa demonstration sites for seed production; seed distribution plan develop			196

\*MISC - portion of this acreage is included in the watershed partnerships' invasive/weed control area; residential surveys also done with property owners permission

FINANCIAL SUMIWARY - FISCAL YEAK 2017													
GRANTEE	PAYROLL	TRANSPORTATION	CONTRACTUAL	UTILITIES	TRAVEL	FIELD CREW COSTS	SUPPLIES, MATERALS, EQUIPMENT	OTHER COSTS	Administrative and Overhead costs	Total Grant Amount	Funds Used	UNUSED FUNDS	FUNDS LEVERAGED
East Maui Watershed Partnership - UH	\$161,906.00	\$3,600.00	\$75,590.00	\$3,990.00	\$7,024.00		\$6,144.00	\$5,815.00	\$40,931.00	\$305,000.00	\$0.00	\$305,000.00	-
The Nature Conservancy - Waikamoi Haipua'ena Source Protection Project	\$143,913.00		\$30,000.00				\$0.00	\$0.00	\$26,087.00	\$200,000.00	\$106,876.86	\$93,123.14	
Leeward Haleakala Watershed Restoration Partnership - UH	\$121,476.00		\$27,800.00	\$3,840.00	\$4,490.00	\$2,330.00	\$5,082.00	\$13,100.00	\$16,882.00	\$195,000.00	\$0.00	\$195,000.00	
Auwahi Forest Restoration Project - UH-ORS	\$22,269.00	\$6,918.00		\$2,402.00			\$285.00		\$5,126.00	\$37,000.00	\$0.00		
West Maui Mountains Watershed Partnership - UH	\$319,495.00		\$25,000.00	\$5,614.00	\$6,700.00	\$8,500.00	\$15,700.00	\$9,900.00	\$39,091.00	\$430,000.00	\$0.00	\$430,000.00	
Pu'u Kukui Watershed Preserve - Tri-Isle RC&D	\$113,300.00	\$14,400.00	\$61,500.00	\$2,020.00		\$10,930.00	\$52,000.00	\$9,850.00	\$36,000.00	\$300,000.00	\$59,371.10	\$240,628.90	
The Nature Conservancy - Honokowai and Wahikuli Source Protection Project	\$15,522.00		\$41,000.00					\$0.00	\$8,478.00	\$65,000.00	\$7,704.64	\$57,295.36	
The Nature Conservancy - Waikamoi Haipua'ena Source Protection Project	\$143,913.00		\$30,000.00				\$0.00	\$0.00	\$26,087.00	\$200,000.00	\$106,876.86	\$93,123.14	
The Nature Conservancy - East Molokai Watershed Partnership	\$75,000.00		\$142,391.00				1		\$32,609.00	\$250,000.00	\$131,974.80	\$118,025.20	
Maui Invasive Species Committee - UH	\$216,451.00								\$33,549.00	\$250,000.00	\$0.00	\$250,000.00	
Hawaii Agriculture Research Center	\$25,800.00	\$1,000.00	\$25,000.00	\$1,000.00	\$3,500.00		\$1,500.00	\$0.00	\$10,200.00	\$68,000.00	\$20,578.90	\$47,421.10	
TOTAL	\$1,359,045.00	\$25,918.00	\$458,281.00	\$18,866.00	\$21,714.00	\$21,760.00	\$80,711.00	\$38,665.00	\$275,040.00	\$2,300,000.00	\$433,383.16	\$1,829,616.84	\$0.00

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PROCESSING DISENCUMBERED