



77 Hookele St., Suite 202
Kahului, HI 96732

Maui Soil & Water Conservation Districts

2016

Annual Report



DLNR— Division of Water & Land Management

USDA— Natural Resource Conservation Service

Serving

Olinda— Kula SWCD

Hana SWCD

West Maui SWCD

Central Maui SWCD



OFFICE OF THE MAYOR

County of Maui
200 South High Street
Wailuku, Maui, Hawaii 96793

A MESSAGE FROM MAYOR ALAN M. ARAKAWA

Aloha Kākou,

On behalf of the people of Maui County, I am honored to congratulate the Maui Soil and Water Conservation Districts for protecting our islands' most precious natural resources.

Our entire community depends on having clean water and stable, healthy soil, and Maui Soil and Water Conservation District members have worked hard to educate our citizens by offering effective educational and outreach programs.

Fostering the science and art of natural resource conservation has proven to be especially vital in these challenging times of increased demand and diminished availability. We are grateful for the efforts of each of the members who have worked for many years to continually improve our islands' productive lands and environment.

Please accept my gratitude for each of the Maui Soil and Water Conservation Districts for their dedication and hard work, and my best wishes for another successful year.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Arakawa". The signature is fluid and cursive, written over a light blue horizontal line.

Alan M. Arakawa
Mayor, County of Maui



*Hawaii Association of Conservation Districts
Island of Maui VP Message*

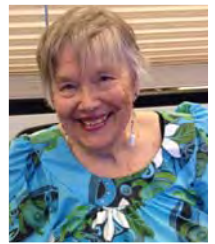
The Soil & Water Conservation Districts (SWCDs) are legally constituted, self governing units under the Hawaii Soil and Water Conservation Law, Chapter 180, Hawaii Revised Statutes. Our role is to carry out programs for the protection and conservation of soil and water resources. The Districts' responsibilities also include reviewing and providing comments on Maui County drainage and erosion control plans for land use changes, developments and subdivisions. (Chapter 20.08.080 Grubbing and Grading Permit Review). The Districts also assist in environmental education of the general public through school programs and other methods of recognition for conservation minded citizens.

The SWCDs exist under the State Department of Land and Natural Resources. Each has a board of directors consisting of five voting directors, and a number of associates. SWCD Directors are volunteer citizens from their respective communities, working to provide a healthy natural resources environment for the people by coordinating technical, financial, and educational resources.

All of the programs involving SWCDs are community based. SWCD directors welcome community input toward identifying natural resource problems. The SWCD Program carries out its activities in partnership with County, State, and Federal agencies.

We truly appreciate the ongoing support we receive from DLNR, USDA-NRCS, U.H. Cooperative Extension Service, Mayor Alan Arakawa, Maui County Council Members, Maui County Dept. of Public Works and Environmental Management, Office of Economic Development, State Dept. of Agriculture, Department of Health, Coastal Zone Management, Maui County Farm Bureau, and Tri-Isle Resource Conservation and Development.

Sincerely,
Joyce Kaia
Joyce Kaia
HACD Island of Maui Vice President



Continued Support Needed to Complete Watershed Projects

Lahaina Flood Control Project

The Lahaina Watershed Project, first proposed by West Maui SWCD, is a USDA-NRCS watershed project authorized under the Watershed Protection and Flood Prevention Act (PL-83-566). The Maui County Department of Public Works and the West Maui Soil and Water Conservation District are sponsoring this project to reduce sediment discharge to the ocean and provide flood protection to residential and commercial areas in the southern part of Lahaina town.

Problem:
1880-1980
over 25 damaging floods



Timeline:
1980
Project Initiated
1992
NRCS Authorized



**January 15, 2010
Project Finally Breaks
Ground**



**First 3 phases
completed.
Funding is
needed to
complete the
last 3 phases of the project.**

**Upcountry Maui
Watershed Project**



The Upcountry waterline project was first proposed to USDA NRCS (formerly known as Soil Conservation Service) by the Olinda-Kula Soil and Water Conservation District in 1982, and is a federally-authorized implementation project. The purpose of this project is to improve agricultural water supply to small farmers in the Upper Kula area of Maui through installation of a dedicated agricultural water distribution pipeline system which bypasses the domestic water treatment facility.

As of 2016, five out of seven phases of the mainline and one lateral have been completed. Funding is needed to complete design and construction of one mainline and three laterals.

Project sponsors: Hawaii Department of Agriculture, Olinda-Kula SWCD, and County of Maui Department of Water Supply



USDA Natural Resources Conservation Service
District Conservationist Message

The cooperative efforts between the USDA-Natural Resources Conservation Service, Kahului Field Office and the Maui Soil Water Conservation District personnel are reaching out to the community to provide conservation technical assistance to the people we serve. Conservation technical assistance and Farm Bill Programs not only provide tools and resources to make a major difference in improving Maui’s natural resources, but also to improve working lands for production for the lives of farming and ranching families and the communities in which they live. The 2014 Farm Bill Programs address soil, water, air, plants, and animals at various levels of resource treatments on grassland, non-industrial forest land, and organic and conventional cropland through financial and technical assistance for the following programs; 1) Environmental Quality Incentives Program, 2) Conservation Stewardship, 3) Agricultural Management Assistance, 4) Regional Conservation Partnership Program, 5) Agriculture Conservation Easement Program-Wetland Reserve Easements, and 6) Healthy Forest Reserve Program.

Maui County has a very diverse base of agriculturists. We are working with more than fifty operators at the USDA Service Center, and have obligated more than \$400,000 to address resource concerns on pasture land, cropland, and forestry. We encourage producers and individuals to contact our office at 808-871-5500 extension 107 to learn more about the 2014 Farm Bill Program and how it can help you help the land.

Mahalo Nui Loa to our partners for their continued support throughout the years. The NRCS Kahului Field Office staff recognizes and appreciates the support and efforts of the Maui Soil and Water Conservation Districts, Hawaii Association of Conservation Districts, Maui County Farm Bureau, Mayor Alan Arakawa, Maui County Council Members, Department of Public Works and Environmental Management, Department of Health, Department of Land and Natural Resources, Maui Conservation Alliance, Maui Axis Deer Program, UH Cooperative Extension Service, Maui Invasive Species Committee, East Maui Watershed Partnership, West Maui Mountains Watershed Partnership, Pu’u Kukui Watershed, Environmental Protection Agency, US Fish and Wildlife Service, USDA-Farm Service Agency and the Tri-Isle Resource Conservation & Development.

Ranae Ganske-Cerizo
District Conservationist

Kahului Field Office

USDA is an equal opportunity provider and employer.



Ranae Ganske-Cerizo
USDA NRCS
District Conservationist



Carl Hashimoto
USDA NRCS
Soil Conservation



Kahana Stone
USDA NRCS
Soil Conservationist



Ryan Woolbright
USDA NRCS
Civil Engineer



Jennifer Higashimo
USDA NRCS
State Biologist/Environmental



Maggie Kramp
Maui SWCDs
Administrative Assistant



Jason Hew
Maui SWCDs
Conservation Specialist



Mahalo to Maui SWCD Conservation Specialist Kylie Wong for the service you provided to the Maui SWCDs and USDA NRCS. Best wishes to you as you begin your new career with the University of Hawaii College of Tropical Ag and Human Resources, Cooperative Extension Service as the Sustainable and Organic Junior Agriculture Extension Agent.





“We All Need Trees” is this year’s theme for the National Association of Conservation Districts. Trees are an essential part of our daily lives. Trees provide oxygen for us to breath. Trees can be used for shelter and protection from the elements. Trees produce food to eat and fiber that we use to make clothes. Trees are an integral component of a watershed system. Trees can be beneficial for the soil and improve the land that we live on.

DeBolt Gardens Foundation (DGF) is a Maui based non-profit organization. Its mission is to *help protect the Hawaii Aina that we all love. Plant natives, grow food, live well. Teach the youth. From generation to generation.* DGF is located in Piiholo in the Olinda-Kula SWCD, and is an example of an outstanding cooperator.

Maui SWCD Conservation Specialist Jason Hew spoke with Lindsay Manuel, President of DGF, about his reforestation projects and how our agency was able to assist with his objectives. Lindsay Manuel believes in the importance of endemic and endangered plant and wildlife species, and feels that he has the responsibility to try and save those species. He heard about the SWCDs through his Natural Resource Management class at UH Manoa. He then talked about his objectives with a friend, who just so happened to be a conservation specialist with the Maui SWCDs. According to Lindsay, the best part of the reforestation effort for DGF was being able to receive financial assistance for a project that he was going to do anyways, and now he can accomplish his goals faster.

With one conservation plan completed, DGF returned to the Maui Soil & Water Conservation Districts for a second conservation plan. Both plans are native forest restoration plans that incorporate a high diversity of native plant species, and a fence enclosure to protect the plantings. The reforestation effort has changed the landscape and ecology of the property in beneficial ways. Lindsay has noticed differences in the soil structure; with the color shifting from a reddish hue to a darker brown indicating the increase in organic matter, there is less erosion during precipitation events signifying a higher infiltration rate. The established native plants are beginning to produce seedlings and fill in the gaps between plants. Lindsay says that the area is starting to become a self-sustainable and functioning native ecosystem. One of the coolest changes has been the wildlife that now visits the project location. Lindsay has noticed an



Before



After



Hawaiian hoary bat over DGF enclosure

increase in butterflies and pollinator insects in the area. Also, the endangered Hawaiian hoary bat has been observed flying over and “dive bombing” around the enclosure.

Lindsay is happy that he found an agency that supports his vision and DeBolt Gardens Foundation’s mission. After the second conservation plan is complete, DGF will have planted approximately 2600 native trees and shrubs. The Maui Soil and Water Conservation Districts would like to recognize Lindsay Manuel and DeBolt Gardens Foundation’s continued efforts and excellence in conserving Maui’s natural resources.



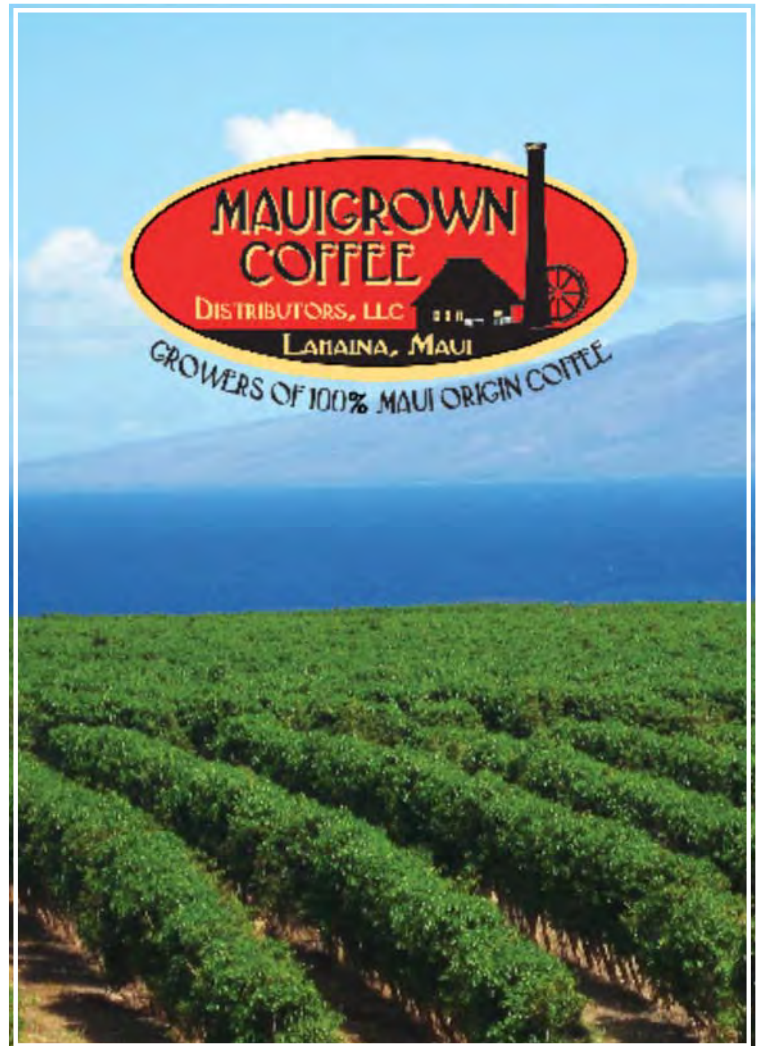
A diverse mix of native species showing Mamaki, Koa, Aalii, Mamane, and Haha

*The finest ice cream
made fresh daily on Maui...*



*Now available in markets,
restaurants and scooping parlors
throughout Hawai`i*

www.roselani.com



A row of ten different beverage bottles is displayed against a background of a scenic valley. From left to right, the bottles are: a glass bottle of Coca-Cola with a white floral wreath around its neck; a plastic bottle of Diet Coke; a plastic bottle of Coca-Cola zero; a plastic bottle of Sprite; a plastic bottle of Dr Pepper; a plastic bottle of Diet Dr Pepper; a plastic bottle of Bang's root beer; a plastic bottle of fruitwater; a plastic bottle of vitaminwater; and a plastic bottle of smartwater. Below the bottles, the text "Maui Soda & Ice Works, Ltd." is written in a large, elegant, serif font. At the bottom of the image, the text "Serving our Valley Isle since 1888" is written in a smaller, serif font. The background shows a wide valley with green fields, a dirt road, and a small white building, all set against a backdrop of rolling hills and a clear sky.

Hawaii's Last Sugar Plantation - End of an Era

On January 6, 2016, Hawaiian Commercial & Sugar Company announced closing its operation at the end of the year, which marks an end to plantation agriculture that shaped Hawaii's history.

HC&S has a long history in agricultural development and is deeply intertwined with the Maui community and with generations of our families. The company was first incorporated in 1882 as the result of a series of plantation mergers, including the original plantation of Samuel T. Alexander and Henry P. Baldwin, whose partnership ultimately became Alexander & Baldwin, Inc.



Photo: <http://hcsugar.com/>



Francisco Cabrera, HC&S Heavy Equipment Operator, circa 1950

Plantation owners were responsible for bringing large numbers of workers to Hawaii from China, Japan, Korea, Portugal, and the Philippines, shaping the unique ethnic makeup of the islands.

HC&S is Hawaii's largest provider of raw sugar, producing as much as 200,000 tons each year on its 36,000-acre plantation located in central Maui and on the slopes of Mt. Haleakala.

In addition to the growing and milling of sugarcane, its principal businesses include the production of raw sugar, specialty sugar, molasses, and the generation of electricity to help provide power across the island.

Giving back to the community by actively participating to help shape our community and improve the lives of others are long-held values at HC&S. HC&S and its parent company, Alexander and Baldwin, have been long-standing sponsors of a number of popular community events on Maui. The HC&S Community Initiative has provided over \$160,000 to Maui organizations in the past two years.

The Maui Soil & Water Conservation Districts have also benefitted from HC&S's sense of community. One of HC&S's many community initiative projects includes providing manpower to prepare for the Annual Conservation Awareness Program – Land Judging Contest, and donating funds for the winning team to advance in the state and national competition.



HC&S prepared its field for students to test their knowledge at the land judging contest



HC&S employees help serve lunch prepared by Buddy Nobriga for the CAP land judging contest participants.



HC&S construction crew working on the Maui Fair horticulture section



March 2, 2016, Maui News Photo
HC&S Employees Gather at Last Blessing for Sugar Harvest

Mahalo to HC&S for being an important part of Maui, and best wishes to the employees and their families.





2016 Ag in the Classroom at Haleakala Ranch



Volunteers from Maui Electric Company, HC&S, Monsanto, UH Cooperative Extension Service, Maui Master Gardeners, Haleakala Ranch, Leeward Haleakala Watershed Restoration Partnership, East Maui Watershed Partnership, and the Maui Soil & Water Conservation Districts participated in the 2016 Maui County Farm Bureau Ag in the Classroom. Approximately 700 second graders from Maui Adventist, Carden Academy, Doris Todd, Princess Nahienaena, Wailuku, Kahului, Lihikai, Pukalani, and Hana Elementary School participated in this two-day event. The students learned about above and below ground crops/nutrition, new plants from plants and not from seed, parts of a plant, canoe crops, what is a watershed, and dogs in managing livestock.

Annual Conservation Awareness Program — Land Judging Contest

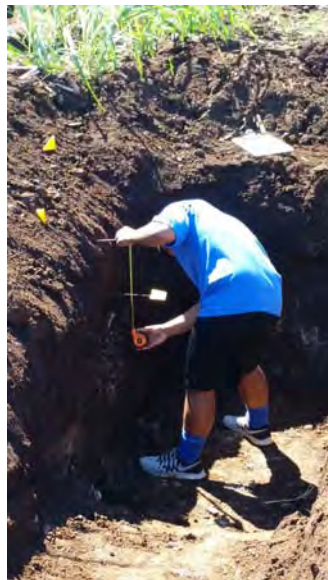
Where students used their knowledge about the physical features of soil, and factors affecting land use and classification, to evaluate 3 sites for the contest. The contest not only provides students with a fun way to learn about local soil and water resources, but it also taught them how to recognize resource concerns and how to address them with conservation practices.



Identifying Soil Texture



Determining Slope Percentage



Measuring Soil Erosion/Soil Depth



Checking Field Conditions



(l-r) 2015 Maui Contest Winners with West Maui SWCD/CAP Contest Chair Jay Nobriga
2nd place team: St. Anthony High School, Rey Ramirez, Mindy Montalvo, Joshua Schwartzlow; 1st place team: Kamehameha Schools Maui, Kylie-Ann Pastor, Konapiliahi Dancil, Zachary Luis, Brenden Otani; 3rd place team: Home School—Soil Seekers, lasbele Werk, Issac Werk, Emma Stoltzfus, Morgan Stoltzfus

Acknowledgment



Advisors: Leo Tomita, Baldwin High School; David Stoltzfus, Home School—Soil Seekers; Duane Iwamura, Kamehameha School; David Rostetter, Maui High School; and Stephanie Betancourt, St. Anthony High School

UH Cooperative Extension Service: Cindy Reeves, Robin Shimabuku, Norman Nagata, Nancy Ooki, and Clarisse Baisa

USDA-NRCS: Ranae Ganske-Cerizo, Kahana Stone, Carl Hashimoto, and Ryan Woolbright

Maui SWCD Staff, Directors, Associates, Earth Team Volunteer: Maggie Kramp, Kylie Wong, Jason Hew, Jay Nobriga, Brian Hashiro, Richard Sylva, Buddy Nobriga, and Pamela Kantarova

HC&S, Nobriga Ranch, Maui Soda & Ice Works, and Roselani Ice Cream

Mahalo for Your Participation

The contest would not have been possible without you and we truly appreciate it!

If you would like to make a donation towards the Maui Soil & Water Conservation Districts' education program and other conservation efforts, contact the Maui SWCDs at 808-871-5500 ext. 3



Students from the Ag in the Classroom watch as Haleakala Ranch Livestock Manager explains how dogs can be used on ranches



Jason Hew making observations during the SVAP2 training regarding stream health

Conservation Specialists' Update

Conservation District	Active Conservation Plans		FY 2016 Farm Bill Contracts Completed by Conservation Specialists	
	# of Plans	Cost	# of Contracts	Cost
Hana	2	\$ 52,672.00	1	\$ 52,197.00
Olinda-Kula	13	\$ 270,406.00	8	\$ 206,319.00
Central Maui	3	\$ 218,425.00	1	\$ 91,792.00
West Maui	6	\$ 170,630.00	1	\$ 21,518.00



Group picture from the Cover Crop Training at the Hoolehua Plant Materials Center



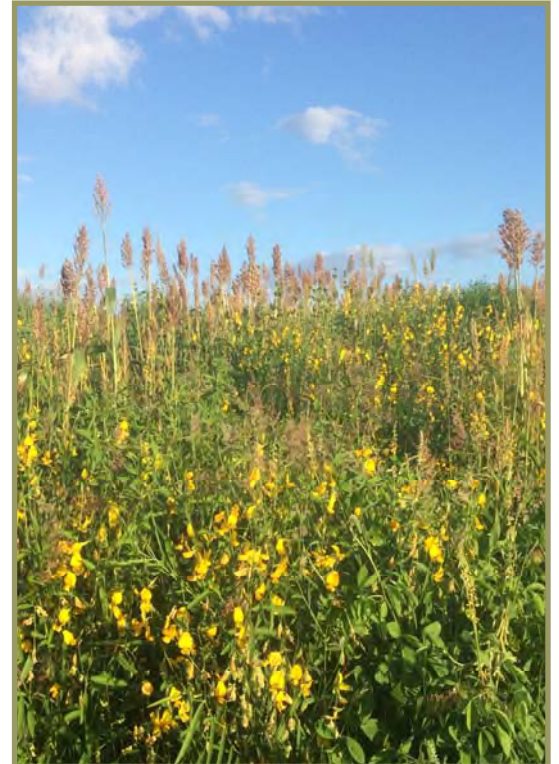
Jason Hew taking grass clippings from a pasture in East Maui



Kylie Wong in front of a
cooperator's timber planting



Beef Quality Assurance training–
Vaccines



Cooperator's cover crop mix



A West Maui SWCD cooperator's field



Participants of the 2015 CAP Land Judging Contest



Kylie Wong handing out sweet
corn plants to students at Ag in
the Classroom

Olinda-Kula SWCD, Est. 1948



Clark Hashimoto
Chairman



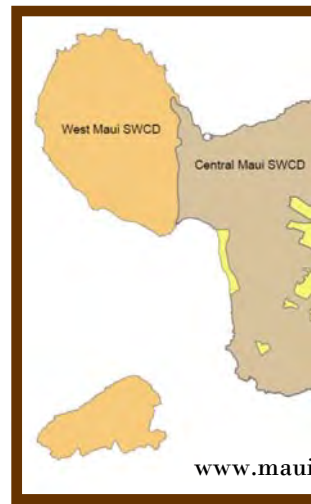
Garret Hew
Vice Chairman



Neil Nakamura
Secretary-Treasurer



Alan Nago
Director



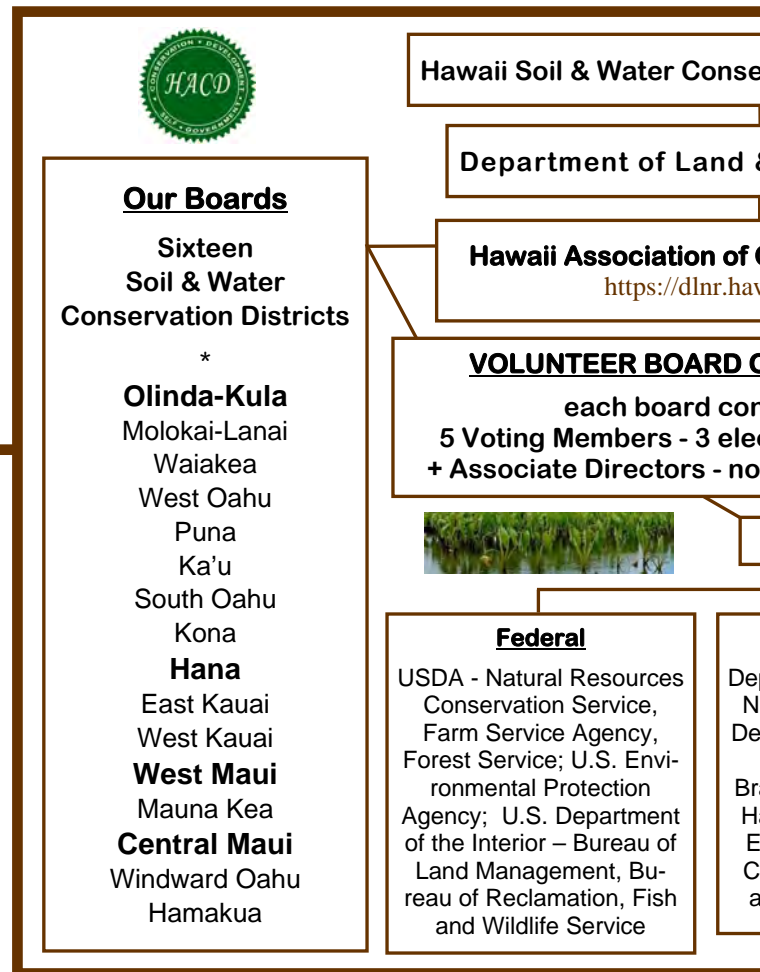
Koa Chang
Director



Jacob Tavares
Director



Robin Shimabuku
Associate Director



West Maui SWCD, Est. 1954



James J Nobriga
Chairman



Daniel Pomaika'i
Kauniaupio-Crozier
Vice Chairman



Kimo Falconer
Treasurer



Jeff Rebugio
Secretary



Ian Swezey
Director



Wes Nohara
Associate Director



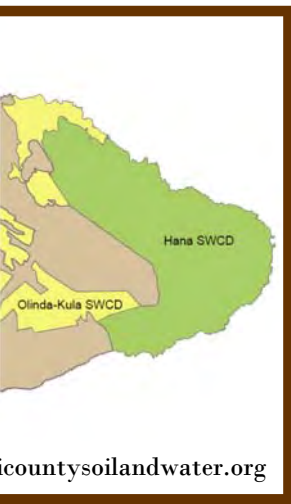
Brian Hashiro
Associate Director
Retired 12/31/16



Daniel Ornellas
Associate Director



Dave Minami
Associate
Director



Hana SWCD, Est. 1953



JoLoyce Kaia
Chairwoman



Annette Smith
Secretary



Susan Cuffe
Treasurer



Frank Oliveira
Director

Conservation Law, Chapter 180

Land & Natural Resources

Conservation Districts

hawaii.gov/swcd

Board of Directors

Consists of
elected, 2 appointed
non-voting members

Our Partners

State

Department of Land & Natural Resources,
Department of Health
- Clean Water Branch, University of Hawaii Cooperative Extension Service,
Coastal Zone Management Program

County

County of Kauai,
City & County of Honolulu,
County of Maui,
County of Hawaii



Non-Profit

Hawaii Farm Bureau Federation,
Resource Conservation and Development - Garden Isle RC&D,
Oahu RC&D, Tri-Isle RC&D, and
Big Island RC&D



National Association of Conservation Districts

3000 Conservation Districts
Represents America
<http://www.nacdnet.org>

Our mission

is to provide a healthy natural resources environment for the people by coordinating technical, financial, and educational resources.

Central SWCD, Est. 1957



Doug MacCluer
Associate/Chairman



Dan Clegg
Vice Chairman



Scott Meidell
Treasurer



Mae Nakahata
Director



Mike Murakami
Director



Mike Silva
Director

Associate Directors



Randal Moore, Richard Sylva, Darren Strand, Michael Reyes

Waikamoi Flume Field Trip Report

By Jason Hew

The Maui Soil & Water Conservation Districts (SWCD) hosted a field trip to the newly reconstructed Waikamoi Flume on July 21, 2015. Personnel that were in attendance included Maui SWCD employees, NRCS staff, and members of the Olinda Kula SWCD board. The purpose of this field trip was to observe the newly reconstructed flume, as well as to learn more about the Upper Kula water system and where the water comes from that supplies residential and agricultural operations in Upcountry Maui.



Figure 1: Intake at Haipuaena stream

The Waikamoi flume is an integral component of the Upper Kula system, conveying water that is produced by the Waikamoi forest in East Maui. The flume runs approximately 1.1 miles in length, begins at 4325' elevation and ends at 4225' elevation. The Waikamoi flume is situated within the Koolau Forest Reserve in the East Maui Watershed. The Waikamoi flume starts at its intake at Haipuaena stream (Figure 1) to the east, and terminates just shy of Waikamoi stream to the west. The flume also traverses the Puohokamoa stream as well as 13 smaller unnamed tributaries. Intakes at each stream contribute freshwater to the water system to be used by upcountry residents, farmers, and ranchers.

The Kula Water System has roots back to 1912 when the local government installed a wooden dam and intake located in the Waikamoi stream.

A pipeline was also installed from Waikamoi and traveled through the Kula district, ending in the Ulupalakua Ranch area, a distance of approximately 19 miles. With the newly available water farmers were able to establish farms with truck crops, and ranchers had the necessary water to raise cattle. In 1918 a 6.0 million gallon reinforced concrete reservoir was constructed as storage for drought events. During the 1930's the Original Waikamoi flume was constructed out of Redwood timbers (flume box and bridges/trestles), cut rock (Figure 2)



Figure 2: Cut rock from the original flume foundation



Figure 3: Redwood flume from 1974-1975

and concrete masonry (foundations). In 1974 and 1975, East Maui Irrigation (EMI) took over management of the flume from The County of Maui, Department of Water Supply (DWS) and replaced the existing 1' X 1' flume box with a new 1 ½' X 1' Redwood box (Figure 3). The original foundations and trestles/bridges were still used. After years of weathering, the flume box was in poor condition. According to DWS estimates, during peak flows approximately 40% of the water conveyed by the flume was lost through various cracks and holes along the length of the flume. The bridges and trestles were also in poor condition, making routine travel dangerous for maintenance personnel. The State of Hawaii, Commission on Water Resource Management issued a directive that required DWS to replace the Waikamoi flume structure in order to reduce waste and system loss, and improve worker safety. Reconstruction of the flume will increase the efficiency of the system and help to ensure a reliable source of water to up-country Maui residents for domestic and agricultural purposes.

The reconstructed flume was designed for maximum efficiency with safety as a priority.

The cost for reconstruction was estimated at \$10 - \$15 million. Final cost after completion was \$11.5 million plus \$300,000 in change order. The change order went towards access road improvements and upgrades. The access road is an unpaved gravel road that experienced some washouts during flume construction.

The information and history of the flume is very remarkable. Along with this information, we got to experience firsthand the terrain and ecosystem in which the flume is located. An abundance of native flora was observed, unfortunately invasive species were also noticed in alarming amounts. Kahili ginger (*Hedychium gardnerianum*) was present in vast amounts along the access road. Invasive species along the Waikamoi flume included: Fireweed (*Senecio madagascariensis*), Florida blackberry (*Rubus argutus*), Andean blackberry (*Rubus glaucus*), Vervain (*Stachytarpheta cayennensis*), Cane Tibouchina (*Tibouchina herbacea*), Juncus (*Juncus sp.*), and Christmas berry (*Schinus terebinthifolius*). Along with plant species, signs of feral pigs were also present along the flume (Figure 4). While walking the flume, participants at the front of the group actually witnessed a sow and her piglets that were startled and fled. As seen in figure 7, the damaged area is a host for invasive plant species, as well as a source of erosion. A small gully can be seen forming in the center of figure 4. Native plant species included Koa (*Acacia koa*), Ohia (*Metrosideros polymorpha*), Ohawai (*Clermontia grandiflora* subsp. *grandiflora*), Haha (*Cyanea aculeatiflora* & *Cyanea macrostegia*), Ohelo (*Vaccinium calycinum*), Puahanui or Kanawao (*Broussaisia arguta*), Kakae moa (*Melicope clusiifolia*), Hapuu ii (*Cibotium menziesii*), Hapuu pulu (*Cibotium glaucum*), Kilau (*Dryopteris glabra*), Uluhe (*Dicranopteris linearis*), Pukiawe (*Leptecophylla tameiameia*), Apeape (*Gunnera petaloidea*), and various other species. No native fauna was observed, although six avifauna are known to occur in the area including the endemic Apapane (*Himatione sanguinea*) and Iwi (*Vestaria coccinea*) and the endangered Akohekohe (*Palmeria dolei*) and Kiwikiu (*Pseudonestor xanthophrys*). One mollusk was observed along the flume on an under-story leaf (figure 5).



Figure 4: Evidence of feral pigs



Figure 5: Mollusk identified as *Catinella baldwini*

A small gully can be seen forming in the center of figure 4. Native plant species included Koa (*Acacia koa*), Ohia (*Metrosideros polymorpha*), Ohawai (*Clermontia grandiflora* subsp. *grandiflora*), Haha (*Cyanea aculeatiflora* & *Cyanea macrostegia*), Ohelo (*Vaccinium calycinum*), Puahanui or Kanawao (*Broussaisia arguta*), Kakae moa (*Melicope clusiifolia*), Hapuu ii (*Cibotium menziesii*), Hapuu pulu (*Cibotium glaucum*), Kilau (*Dryopteris glabra*), Uluhe (*Dicranopteris linearis*), Pukiawe (*Leptecophylla tameiameia*), Apeape (*Gunnera petaloidea*), and various other species. No native fauna was observed, although six avifauna are known to occur in the area including the endemic Apapane (*Himatione sanguinea*) and Iwi (*Vestaria coccinea*) and the endangered Akohekohe (*Palmeria dolei*) and Kiwikiu (*Pseudonestor xanthophrys*). One mollusk was observed along the flume on an under-story leaf (figure 5).

The field trip allowed us to observe the watershed from which water for Upcountry Maui farmers and ranchers originates, and the method of transporting the water over long distances. The water from the flume gets transferred into the Waikamoi stream where there is an intake. The water goes through the intake and into a 42" corrugated pipe. This corrugated pipe takes the water into the two Waikamoi reservoirs with a capacity to store 30 million (combined) gallons of water. This water is then received by the two 50 million gallon Kahakapao reservoirs before being fed to the Olinda Water Treatment Plant. From here the water is transported to the residents, farmers, and ranchers of Upcountry for domestic and agricultural use.



We would like to thank Garret Hew and the entire Olinda Kula SWCD board for providing us with this opportunity.



Kahului Field Office Staff and the Olinda-Kula SWCD Board

Ag Day at the State Capitol



Mae Nakahata, Koa Martin, and Representative Lynn Decoite at the HC&S Booth



Boy Scouts from Schofield learn about resource concerns and conservation practices at the Maui SWCDs/HACD booth.

Carlsmith Ball LLP

A LIMITED LIABILITY LAW PARTNERSHIP

Thank you to the

Maui Soil & Water Conservation Districts

for their invaluable service to the community.

Maui Office Attorneys

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Craig G. Nakamura

Catherine L. M. Hall

Nancy H. Zhao

One Main Plaza, Suite 400

2200 Main Street

Wailuku, Maui, Hawaii 96793-1086

P 808.242.4535 F 808.244.4974

Carlsmith.com

West Maui Fire Prevention and Post Fire Erosion Stabilization Supply Procurement and Native Seed Hydromulch Trials to Reduce Sediment Erosion Pomaika'i Kaniaupio-Crozier, Project Manager

Lands cleared by fire are open to mass erosion in rain events, which can contribute to the sediment deposited on coral reefs below. The purpose for this project is to secure and store necessary supplies to enable an immediate erosion control response, as well as take steps towards prevention.

Three Project Objectives:

1. Develop the structure for a post-fire response team and create “go-time” plan
2. Secure, test and store post-fire stabilization materials
3. Mitigate pre-fire hazard by managing vegetative fuels

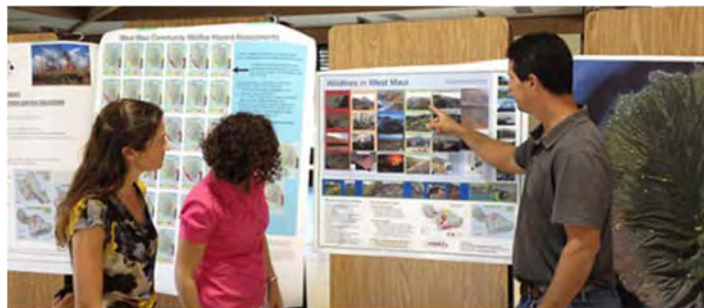
Anticipated Outputs (products) and Outcomes:

- Will ultimately result in a reduction of sediment migrating into the marine environment following fire and rain events.
- West Maui community partners will have greater awareness and cohesion as they mobilize for fire prevention and post fire actions increasing the likelihood that a more rapid response will be possible in other sections of West Maui should a fire take place.

Project Partners:

- Pu'u Kukui Watershed Preserve
- West Maui Fire Task Force, which includes members from the County of Maui, Maui Fire Department, Police Department, West Maui Land Owners and Managers, West Maui Mountains Watershed Partnership, DLNR Fire Team, and others.
- Hawaii Wildfire Management Organization
- State DLNR Division of Aquatic Resources
- National Oceanic and Atmospheric Administration
- Tova Callender, West Maui Watershed and Coastal Management Coordinator
- West Maui Soil & Water Conservation District

West Maui Community Wildfire Protection Plan Meeting



Pomaika'i Kaniaupio-Crozier points out wildfires he's witnessed in West Maui
Photo by Hawaii Wildfire Management Organization



Pu'u Kukui Watershed Preserve Crew and volunteers collect seeds



Seeds gathered; A'ii'li (left photo), and Koa (photo above)



Photos of seed dehumidifier with experts in reflection, and seed packets seeds at seed lab, where plant material specialists met at a production facility in Waimea, HI, 1/28/16



<http://www.nrcs.usda.gov/wps/portal/nrcs/main/pia/programs/farmbill/>

The 2014 Farm Bill was enacted on February 7, 2014. The USDA Natural Resources Conservation Service offers voluntary Farm Bill conservation programs that benefit both agricultural producers and the environment.

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/pia/contact/>



*To the Maui Soil & Water Conservation Districts . . .
Preserving the best of Maui for future generations.*



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Pacific Island Area Representatives with HACD President Brenda Iokepa-Moses (5th left), NRCS-PIA Director Bruce Petersen (6th left), and Central Maui SWCD Director/HACD Legislative Committee Chair Mae Nakahata (7th left)



HACD President Brenda Iokepa-Moses In Session



Mae Nakahata on Nevada Rangeland Tour Where Rangeland Conservation Issues Converge — Wild Horses, Wildfire, Grazing and Sage Grouse



Wildfires have been a big problem in Utah. Various parties have come together to reach a compromise solution. The junipers are an important cultural symbol to the Native Americans, but they too have recognized the devastation of the fires and have agreed to selective management.

Instead of merely conducting controlled fires to manage growth, a bio-char industry is starting to obtain economic benefit of the invasive trees.

Nene is our state bird, but can create havoc in areas such as the taro farms in Hanalei. Similarly, ravens in Nevada are a problem and they migrate from Mexico, where they are recognized as a sacred bird. Solutions are needed.

These forest areas are also home to the sage grouse that has been suggested for listing as an endangered species. Neighboring states have partnered and successfully stopped sage grouse from getting listed. Collaboration gives results.

Just as the Kona Nightingales from historical coffee days have been an issue on the Big Island, so are wild horses on the range. We saw a few during the tour which was very cold for the girl from Maui!

TRI-ISLE RESOURCE CONSERVATION AND DEVELOPMENT COUNCIL, INC.

The MISSION of Tri-Isle Resource Conservation & Development is to protect, preserve, develop and serve island communities with a focus on Maui County through the implementation, management and fiscal sponsorship of agricultural, civic, cultural, economic and environmental projects.

Our VISION is of a community where partnerships address problems and their solutions, and needs and opportunities in order to enrich the lives of all its members.



Who We Are

The Tri-isle RC&D Council is a community-based non-profit 501(c)(3) organization. A 12-member volunteer Board of Directors, representing all of Maui County governs the Tri-Isle RC&D Council.

History

In 1962, Congress established a unique program within the U.S. Department of Agriculture that empowered rural communities to improve themselves while protecting and developing their natural resources. The focus on local direction and control made Resource Conservation and Development one of the most successful rural development programs of the Federal Government. Currently there are three hundred seventy-five approved RC&D areas.

What We Do

TIRCD provides a mechanism for local residents and community leaders to work together and actively address community, economic, environmental, and agricultural needs. We help utilize the abilities, knowledge and energy of local volunteers to get projects done. Interested groups may approach TIRCD for project sponsorship by submitting a project proposal for consideration by the TIRCD Council.

The Council has taken a strong leadership role in community economic development, water quality issues, and environmental projects. In FY 2015 and FY 2016, TIRCD brought in and managed \$4,056,652.00 in public and private sector grants for over 200 different programs in Maui County. We administer, expend and audit these grant funds on a FY16 Operating Budget of \$372,000.00, of which \$161,568.00 are non-payroll costs.



2015 Maui Business Brainstormers

Grace Fung, Mayor Alan Arakawa, Ann Arakawa, Kahu David Kapaku, Karen Arakawa, Teena Rasmussen, and John Hau'oli Tomoso
At the Small Business Week Opening Ceremonies, Fairmount Kealani Hotel

Contact Us or Donate to:

Tri-Isle RC&D, P.O. Box 338, Kahului, HI 96733
244 Papa Place, Suite 101, Kahului, HI 96732
Phone: (808) 871-1010, Email: Tri-Isle@Tri-Isle.org



OED Grant Management Meeting of TIRCD Projects with Teena Rasmussen, Tema, Jeremiah Savage, Dena Sato, and Barry Gay



Makawao History Museum float at the Makawao Rodeo 4th of July Parade, One of TIRCD's 200 Current projects



Sponsorship Logos of the Haleakala National Park—Hau'oli Mau Loa Foundation Program.

The program provides hands-on opportunities for college undergraduate students to gain experience in a national park setting. Interns are matched with positions based on their academic and/or professional interests and the availability of a staff mentor. This 10-week program provides a meaningful experience in vegetation management at Haleakala National Park. The intern will assist with invasive weed removal, greenhouse work, vegetation monitoring, native outplanting, and other related duties.



Grow Some Good is a nonprofit program dedicated to creating hands-on, outdoor learning experiences that cultivate curiosity about natural life cycles, connect students to their food sources, and inspire better nutrition choices. In addition to helping establish food gardens and living science labs in local schools, we provide resources and curriculum support through community partnerships in agriculture, science, food education and nutrition.

Tri-Isle RC&D was one of many event sponsors for the 4th Annual Taste of School Gardens, March 12, 2016, at Hotel Wailea's Sunset Lawn featuring dishes inspired by all the good things growing in our schools.



<http://growsomegood.org/>

We are fortunate to have legislators who believe farming is the backbone of our community, and that the soil and water conservation program will preserve our resources for future generations. They have helped our program with financial aid both locally and statewide

The Maui Soil and Water Conservation Districts and the people of Maui want to express our thanks and appreciation to the following Senators and Representatives for their active support of the SWCDs in Maui County. Due to their efforts, the Maui Soil and Water Conservation Districts have been able to accomplish their objectives.



Senator
J. Kalani English
District 7
Hana, East and Upcountry
Maui, Molokai, Lanai, Ka-



Senator
Rosalyn H. Baker
District 6
South and West Maui



Senator
Gilbert S.C. Keith-Agaran
District 5
Wailuku, Waihee, Kahului

Representative
Joseph M. Souki
District 8
Kahakuloa, Waihe'e, Waiehu,
Puuhala, Wailuku, Kahului



Representative
Kyle T. Yamashita
District 12
Sprecklesville, Pukalani, Maka-
wao, Kula, Keokea, Ulupalakua,
Kahului



Representative
Angus L.K. McKelvey
District 10
West Maui, Maalaea, North Kihei



Representative
Lynn DeCoite
District 13
Haiku, Hana, Kaupo, Kipahulu, Nahi-
ku, Paia, Kahoolawe, Molokini, Lanai,
Molokai, Molokini



Representative
Kaniela Ing
District 11
Kihei, Wailea, Makena



Representative
Justin Woodson
District 9
Kahului, Puunene, Old Sand Hills,
Maui Lani



The Maui Soil and Water Conservation Districts sincerely appreciate and thank the Maui County Council Members for their active support for the SWCD program in Maui County.

The Maui County Council Members are our strongest unifying factor in the soil and water conservation movement. They help our program with financial aid and believe the soil and water conservation district program will preserve our community for future generations.

Mike White
Council Chair
Makawao-Haiku-Paia



Don S. Guzman
Council Vice Chair
Kahului



Gladys C. Baisa
Council Member
Upcountry



Michael P. Victorino
Council Member
Wailuku,
Waihe'e, Waikapu



Robert Carroll
Council Member
East Maui



Elle Cochran
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