

The O'ahu Soil and Water Conservation Districts



‘A’ohe hana nui ke alu ‘ia

No task is too big, when done together

Mary Kawena Pukui, 1983 ‘Ōlelo No’eau

Annual Report 2017

South O'ahu~West O'ahu~Windward O'ahu

O'ahu Soil and Water Conservation Districts

Promoting responsible stewardship of natural resources in our community

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Message from HACD O'ahu Vice President

Aloha Kākou!

Much thanks and aloha to all our Directors, partners, and planners who keep efforts of conservation moving forward. There are many important pieces to the conservation puzzle, and we wouldn't be able to get it done without all of you.

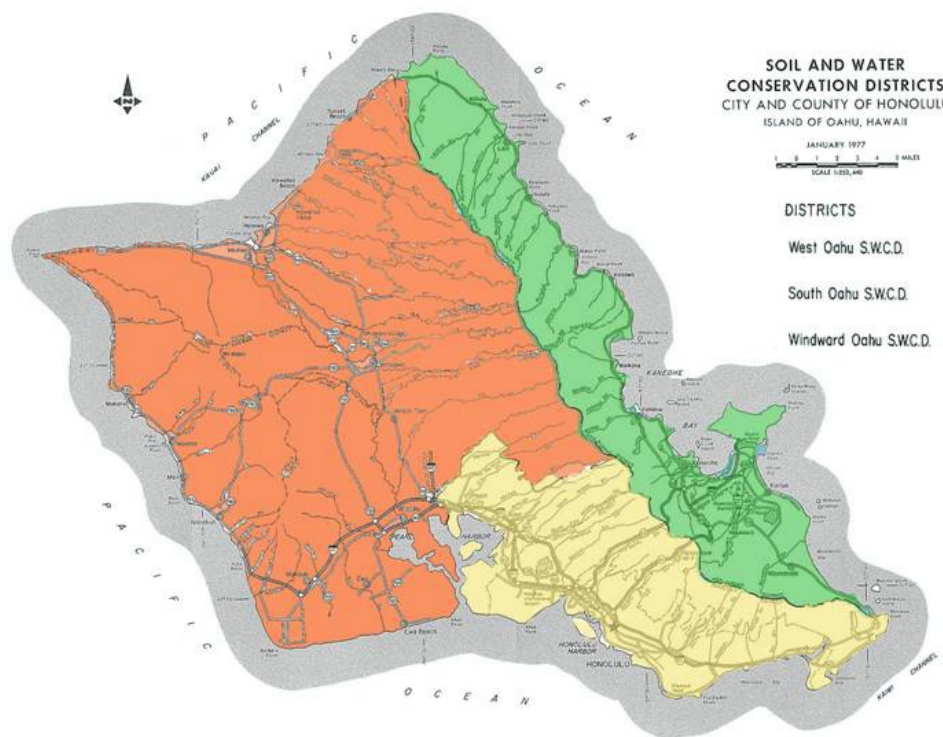
2017 is shaping up to be an exciting year for us here on Oahu as Oahu RC&D has really ramped up their efforts in getting conservation plans created and implemented. They have also just released their beta for 808 Planner, formerly referred to as Hawaii One, an online planning tool intended for land owners/stewards to get the initial parts of their conservation plan developed. I encourage you all to check out their website (oahurcd.org) and get in touch with their staff to try out this new conservation tool!

We look forward to another great year working with all of our important partners in the effort of conservation. Much mahalo to Jean, Stephanie, Dave, Miranda, & Frankie at Oahu RC&D... Bernadette, Morri-Ann, Marie & Mike at NRCS. Last but not least, Puaonaona, Conservation Specialist for HACD and Michelle Outreach and Community liaison for West O'ahu SWCD who help keep our volunteer boards informed and going in Oahu.

Mahalo,

Nathan Miranda
HACD Oahu VP





The O'ahu Soil & Water Conservation Districts and how they can help you...



Who.....

The Soil and Water Conservation Districts (SWCD's) on O'ahu were first established in 1948 by O'ahu farmers, ranchers, and land users to coordinate local efforts in the conservation of soil, water and other natural resources in our communities. The SWCD's are self-governing sub-units of the state and total sixteen currently active in Hawai'i and nearly 3,000 in the nation. In O'ahu we serve communities in 3 SWCD's, South O'ahu, West O'ahu and Windward O'ahu.

Each SWCD is governed by a board of five directors, three elected by agricultural land-users or landowners within the respective district (a director must either live or work in the SWCD) and two appointed by the directors. Our directors and associate directors volunteer their time and have a strong interest in balancing the well-being of our communities with the sustainability of our natural resources.

What....

Our purpose is to encourage conservation and assist land users to properly manage their natural resources, reducing negative effects to the environment. The way we accomplish this is by working with cooperators in our communities as well as working in partnership with the USDA-NRCS, O'ahu Research and Development Council, The Department of Health, The Department of Land and Natural Resources,

The University of Hawai'i, CTAHR and many others to ensure the quality of our lands in Hawai'i. We...

- *Develop conservation plans using best management practices to reduce soil erosion and or other forms of pollution on and offsite of farm/ag. operations.
- *Encourage and assist in surveys, investigations, and research relating to soil and water conservation
- *Conduct community outreach, specifically environmental education in schools and at community events.
- *Coordinate the Conservation Awareness contest for high schools in O'ahu.

These are just a few of the many services the O'ahu SWCD's can provide

How.....

To learn more about the O'ahu SWCD's and the ways we can **HELP** you, contact your O'ahu SWCD Conservation Specialist. Contact: (808) 600-2931.





South O'ahu SWCD Board Members

L-R: Chair; Karen Ah Mai, Vice Chair; Iris Iwami, Treasurer; Dudley Kubo, Secretary; Lisa Rhoden, Director; Cid Inouye

The excitement and opportunity....

The South O'ahu Soil and Water Conservation District (SWCD) is the youngest of the O'ahu SWCD's and is uniquely set apart from the other districts because its boundaries encompass urban Honolulu. The unique landscape of the South O'ahu SWCD is where the excitement and opportunity to support farmers originates. The landscape not only presents various opportunities to approach agriculture in urban settings but can also present challenges in an area plagued by non-point source pollution. The ongoing challenge facing South O'ahu and everywhere in Hawai'i is less land is available for agriculture. However, despite this fact we are seeing farmers with smaller parcels emerging with creative ways to best utilize their land and increase their diversity on site. Specialty products from these unique agricultural operations can provide niche markets and garner profitability amongst this type of agriculture dynamic. This unique landscape also provides the district an opportunity to work directly with community members to learn about the urban agricultural needs and how the district can provide support.

The South O'ahu SWCD meets every first Thursday of the month at

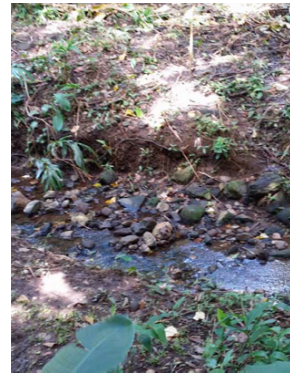
6:30 pm at 3737 East Manoa Road in the back of Mānoa Valley. The district work and meeting discussions range from advocacy for healthy water and soil through conservation practices, potential community collaborations to support farmers and resource management, various monthly meetings to provide mini trainings for the public and ways to strengthen the function between city and county, state and federal partnerships in conservation. The board also maintains an active role at legislature for the support of the O'ahu SWCD's. South Chair, Karen Ah Mai and others on the board are active in advocating for funding to provide more services and outreach opportunities for farmers in O'ahu through the continued staffing and increased number of conservation planners working in the SWCD's.

Another exciting aspect of the South district is the opportunity to work with farmers/land managers that are fortunate to manage large agricultural parcels in the middle of urban Honolulu. With the fortune of having a large piece of land it also imparts that there is now a greater kuleana. Kuleana meaning responsibility but also a privilege in taking care of the land and providing

from the land. The larger the parcel, the greater the environmental impact one individual/farm can have on surrounding areas either negatively or positively. Therefore, proper management of resources is of utmost importance and the mission of the SWCD's.

The benefit of a cohesive and large property dedicated to conservation and/or agriculture in the middle of urban Honolulu is that it provides a great opportunity for the farmer/landowner and the surrounding community. The land can be a source of food and also a place that properly manages natural resources and involves the community to learn together in doing so. An example of this type of community collaboration is featured on our next page with our South O'ahu Cooperator of the Year.





Paradise Park

The South O'ahu SWCD is pleased to feature Paradise Park as this year's Cooperator of the Year. The SWCD has been particularly fortunate to work with cooperators Warren and Nāpua Wong on a beautiful piece of land located in Mānoa, they call Paradise Park. They partnered with the Ala Wai Watershed Association and worked with the Oahu Resource Conservation & Development Council (ORCD), the Hawaii Association of Conservation Districts (HACD) and the Natural Resource Conservation Service (NRCS) over the years to develop a conservation plan to address the deterioration of stream banks along the property and the high presence of invasive species. The amazing multi-partner collaboration happening on site has been made possible through the leadership, coordination and support of the Ala Wai Watershed Association. Their commitment to the health and function of the watershed and managing the natural resources on site support the goals of Paradise Park to return the parcel to its natural environment of native plant and wildlife species conducive to the hula, crafts and practice of the Hawaiian culture and land management system.



Figure 1: Original state of site, filled with invasive species and inaccessible trail ways.

The beginning phases of this wonderful journey taking place at Paradise Park started many years ago with securing proper permissions and guidance from various government agencies and conservation boards. Today the work of many over the years has provided the ability to have volunteers ranging from high school students, college graduate assistants, chefs of hotels along Waikiki and staff and volunteer staff of ORCD

Wong Family

to come together and install conservation practices on site. The implementation phase of the project began over the last year and a half and the work they have accomplished is impressive. To date large albizia trees have been removed from the site along with large tracts of invasive species and upper portions of stream banks have been cleared of overhanging trees and debris that hinder access and proper management. A large number of different native Hawaiian plant species have been planted following removal of invasive species and many are flourishing and being used to propagate in more areas.



Figure 2: Volunteers and 'Iolani paddling team laying jute mat on slope and planting native plant species, 'Ahu'awa.

Going forward with this great work is a large undertaking however, the support and belief is also large in the work that Paradise Park is doing with community partners. The work of many, make the work light and the environment flourish. We thank Nāpua and Warren Wong of Paradise Park for their conservation efforts and being an example of community collaboration and kuleana to the land. We look forward to seeing the continued efforts and accomplishments taking place in the lush and fertile valley of Mānoa.

NRCS Honolulu Field Office



Michael "Mike" Bajinting
Resource Conservationist

Bernadette Luncsford
District Conservationist

Morri-Ann Nagata
Soil Conservationist

Marie Fa'atuala
Soil Conservationist

Organic Farming and Urban Agriculture Initiative

The Natural Resource Conservation Service's (NRCS) Honolulu field office consists of Soil Conservationists, Morri-Ann Nagata and Marie Fa'atuala, and Resource Conservationist, Michael "Mike" Bajinting and led by District Conservationist, Bernadette Luncsford. The NRCS field office staff on every island is integral to the partnership between HACD and NRCS because they are the initial group of people that HACD conservation specialists first meet, learn and work with. The staff in Honolulu provides great support to the HACD/NRCS partnership in housing the HACD Conservation Specialist and working with them and providing technical assistance and training for CTA (non-contracted) plans or conservation technical assistance plans. This year has been busy and staff and partner HACD staff have been providing conservation support and outreach to the many clients on O'ahu. There has also been various training opportunities ranging from environmental compliance, grazing, windbreak technology, multi-story cropping and agroforestry practices.

In May, the field crew was also fortunate to meet a husband and wife planner team working with farmers across the continent to transition to organic farming. The Organic Farming and Urban Agriculture Initiatives from the NRCS are great opportunities for farmers interested in incorporating or completely moving over to organic methods in their farming operations or who may be looking for unique opportunities needed to support their agricultural operation in an urban landscape. The NRCS field office staff can answer any questions regarding these ongoing initiatives and possibilities for financial cost share assistance and support. The NRCS PIA website is also a source for further information.

Lastly, many changes throughout NRCS PIA have been happening over the course of the year and a very welcomed change is the presence of a new NRCS PIA State Director. Travis Thomason joined O'ahu NRCS team in May from Utah and has hit the ground running with learning about all the various SWCD's and NRCS field offices. His outlook for agriculture and conservation in O'ahu and the entire state is refreshing and exciting. We look forward to his leadership for years to come and appreciate his commitment to the great collaboration between HACD and NRCS which strengthens our agricultural community in Hawai'i and our reach of support in the federal, state and local levels of conservation.



West O'ahu SWCD Board Members

L-R: Chairman; Larry Jefts, Vice Chairman; Alan Gottlieb, Secretary; John McHugh, Treasurer; Joe Para, Director; Peter Gibson

Letter from the Chair, Larry Jefts....

Dear Directors and Partners of the Hawaii Association of Conservation Districts,

The West Oahu Soil and Water Conservation District (SWCD) is pleased to share news about 2016, a year of growth and progress in meeting our mission. Some of our successes include:



- 33 New Cooperators working with West Oahu SWCD on 3868.96 acres
- 2578.26 Conservation Plan acres added in 2016 on 35 agricultural parcels
- 604 School teachers and students supported with education programming
- 1127 Community members directly supported through one-on-one meetings, presentations, and outreach.

The Natural Resource Conservation Service Oahu field office including District Conservationist, Bernadette Luncsford, and staff, Morri-Ann Nagata, Marie Fa'atuala, and Michael Bajinting, have made themselves available for numerous meetings, calls, and emails and in so doing have provided guidance and support to the District's staff and partners. Our

relationship continues to strengthen, which is essential in meeting the needs of our growing farmer population. The Oahu Resource Conservation and Development Council is another bright partnership. The organization drafted 25

conservation plans for Cooperators in our District in 2016. Conservation Specialists include Stephanie Mock, who joined in October of 2015, and Frankie Koethe and Dave Elliott, who joined in October of 2016. They have a wealth of energy and experience and hit the ground running under the direction of Executive Director and TSP, Jean Brokish. We look forward to growing these as well as other private and public partnerships in 2017.

For example, through a relationship with the Hawaiian Islands Land Trust and the Division of Forestry and Wildlife, West Oahu SWCD is collaboratively hosting Landowner Assistance Workshops in the summer of 2017. New connections with the Hawaii State Teachers Association and the Hawaii Environmental



Education Alliance help to guide and inform our teacher training and student presentations.

Stay up-to-date with news from the District and our partners by subscribing to the monthly e-news when you visit our website: <http://dlnr.hawaii.gov/swcd/westoahu/>
Sincerely,
Larry Jefts, Chair
West Oahu Soil and Water Conservation District



O'ahu Resource and Conservation Development Council



- ✚ **Provided technical assistance on over 8600 acres** throughout the islands
- ✚ **Developed 36 conservation plans** to support farmers and enhance stewardship of natural resources
- ✚ **Launched a new, online conservation planning tool** called 808 Planner
- ✚ **Engaged over 1000 individuals** regarding natural resource stewardship, conservation planning, and other agricultural topics
- ✚ **Provided internship opportunities** for students including the UH-Hilo PIPES and UH-Manoa Natural Resource & Environmental Management programs
- ✚ **Brought on two new team members** to coordinate efforts in Waiāhole and Ma'ili'ili to assist farmers in technical assistance, conservation planning and cost-share opportunities for conservation practice installation.

- ✚ **Provided over \$70,000 in cost-share to farmers** in Waiahole watershed for best management practice installation to improve water quality
- ✚ **Hosted the first-ever Parade of Farms in Kunia!**

✚ Figure 1-3 (Above, L-R)

1. Organic Farming Workshop hosted by O'ahu RC&D at Kahumana Organic Farm
2. Providing technical assistance to farmers on O'ahu
3. Workshop hosted by O'ahu RC&D focusing on BMPs, agroforestry and cost-share funding for these practices

✚ Figure 4 (Left Top corner)

Stephanie Mock of ORCD speaking at Hawai'i Farm Bureau Annual Convention on new, online conservation planning tool, "808 Planner"

✚ Figure 5 (Bottom Right corner)

Recap of our 2016's "Most Liked" photos on social media. O'ahu RC&D's services include conservation planning, technical assistance, outreach, sunn-hemp seed sales and more!





Windward O'ahu SWCD Board Members

L-R: Chair-Richard "Rick" Towill, Vice Chairman; Brian Cordero (Not pictured), Treasurer-David "Dave" Morgan, Secretary; Nathan "Nate" Miranda, Director; Tyler Jones

Kāne ka wai ola.... Life giving waters of Kāne

The windward side of any island is commonly known for its abundance of water resources and rainfall events. The higher presence of streams and rivers and incidence of rain equates to the many varied agricultural systems scattered throughout the landscape. This provides the community with access to a diverse selection of fruit and vegetable crops and plant products.

As we know, the rain can benefit our environment and our lives in many positive ways such as recharging our groundwater and providing sustenance to an array of plant and wildlife species. We have learned over the centuries that water can also have damaging effects when not properly managed or during a natural disaster. As a result of this knowledge various cultures have developed systems to manage water and divert it safely and effectively for irrigation of food crops. An example of this type of ingenuity can be seen in the highly engineered systems of lo'i kalo or wetland taro cultivation designed by Kanaka Maoli or native Hawaiians to feed entire populations within a ahupua'a (stretch of land stemming from the mountain to the sea). The lo'i kalo system was not only designed to feed the populace of a particular ahupua'a but its very existence in the landscape was a conservation measure to ensure water quality, manage soils and respect the kanawai or water laws of Hawai'i.

The journey of water throughout a lo'i kalo system starts with the po'owai (headwater source) or at the point where water is guided from rivers and streams into manmade ditches or water canals referred to as 'auwai. Water then flows through 'auwai into makawai or inlets and outlets that feed and exit in and out of lo'i kalo. Lo'i kalo can be characterized as manmade ponds that are planted with huli kalo (taro top) and can be large or small in size and found situated alongside a stream. When the water exits via an outlet of a lo'i kalo, the water either returns to the 'auwai or flows into another lo'i kalo until the water makes its way down the ahupua'a. The water returns back to the stream after traveling through many 'auwai into various lo'i kalo and will reach the muliwai (brackish water point). The muliwai is where the fresh water from the uplands meets the salt water of the coastal lowlands. This mingling of waters is considered to be very important because it is where fish spawn and populate the ocean and also impact the water quality of the fishponds or loko i'a. Loko i'a or a fishpond is another ingenuity Kanaka Maoli developed to raise fish and maintain a balanced and vital ocean stock and ecosystem with increasing population needs. In a lo'i kalo system the journey the water takes provides an ecosystem benefit by naturally filtering the water. It acts almost like a series of sediment basins, removing sediment and impurities in the water along the way before arriving at the muliwai. The function and intent of lo'i kalo and loko i'a are to provide food at an optimal level while making the least negative impact on precious natural resources such as water. However, due to the existence of private ownership the ahupua'a system was dismantled and the presence of taro patches depleted and many fishponds filled. The education of these important indigenous agricultural/conservation practices and methods of growing and raising food will ensure this knowledge continues on in the future and youth and communities know the high level of care within land management that existed in our history, so that it can inform our present and guide our future.





Māhuahua 'Ai o Hoi

Kāko'o 'Ōiwi



The Windward O'ahu SWCD is pleased to share about our Cooperator of the Year located in the beautiful wetlands of He'eia. Kāko'o 'Ōiwi is a non-profit organization dedicated to restoring the ecological and agricultural productivity of a 405 acre property. This community effort was given the name Māhuahua 'Ai o Hoi or "replanting the fruit of Hoi" because of its mission to revive the cultural values and economic, social, and natural vibrancy of the area commonly called Hoi.

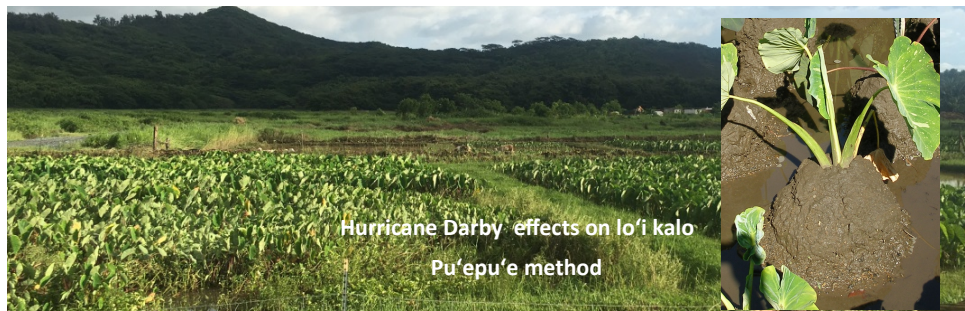
Executive Director of Kāko'o 'Ōiwi, Kānekoa Shultz shares that the vision of the non-profit is to perpetuate cultural and spiritual practices of the Hawaiian people, through a particular focus on Hawaiian agriculture. A large part of that includes lo'i kalo or wetland taro cultivation which allows them to mitigate sediment, increase oxygen, filter water, and provide a native wildlife habitat.

At Kāko'o, they have planted native sedges, grasses and kalo throughout the property. In addition, to aid the production of food on site, they have incorporated the use of organic bed systems using seaweed from neighboring fishpond Paepae 'o He'eia and other materials to provide proper nutrients to crops. They have also relied strongly on mulching to suppress weeds and prefer it over the use of chemicals because of the many waterways. In addition, the use of a herbaceous cover along stream banks has been

beneficial for reduction of weeds and grasses and prevention of soil and other impurities from entering 'auwai.

It is Kāko'o 'Ōiwi's intent to reduce their footprint on the environment as their kūpuna, (elders) did so that the surrounding community can be fed and well cared for. Kāko'o is hoping to decrease their footprint, with each lo'i kalo (taro patch) they open within the large wetland. "More poi means less meat and less carbon footprint in Hawai'i" says Kānekoa. He envisions the area of Hoi and this community effort as having the ability to help with our questions surrounding food security and the sustainability of the environment. The ability of lo'i kalo to feed people and enhance and maintain natural resources is known to Kānekoa but it could not have been clearer after the effects of Hurricane Darby. It was two days after the hurricane and the fences were all blown over, but the importance was the resilience of the lo'i kalo system, including the pu'epu'e method, he states. The Chinese style or pake style of planting kalo is to have soft mud, the pu'epu'e method is harder aerated mud that is mounded around huli kalo (taro top) after planting. The pu'epu'e were more resilient to the flood pulses and the patch was harvested a month later showing that it also maintained the necessary nutrient levels and protected the plant to maturity despite environmental pressures.

The goals of Kāko'o 'Ōiwi to feed their community and sustain Hawai'i's indigenous knowledge and natural resources is a benefit to our SWCD's in Hawai'i. The Windward O'ahu SWCD is grateful for the efforts of Kāko'o 'Ōiwi and their diligence in managing the precious wetlands of Hoi and providing a place of learning and growing for the surrounding windward community and the entire island.





Conservation Awareness Program Contest

The Conservation Awareness Program Contest was held on October 15, 2016 at UH Mānoa College of Tropical Agriculture and Human Resources Poamoho Research Station. The gracious support of Susan Migita of CTAHR Poamoho provided our O'ahu contest a lovely location overlooking the beautiful Waiālua moku (district).

The preparation for the soil pits was a joint effort by Hawaiian Earth Products and Mokuleia Farms. Neil, of Mokuleia Farms was gracious enough to donate his time, machinery and two of his workers to help dig pits and also clean up the site at the close of the contest. The staff of the O'ahu SWCD's along with board members, the NRCS field staff and Robin Shimabuku of CTAHR-Māui were influential in preparation of contest information, parameters and running of the contest.



Windward Board of Director, Nathan Miranda provided beautiful gifts of 'Ohi'a Lehua trees to participants of Leilehua and Olomana High School. Lastly, to fill our

stomachs with 'ono food after a hot day was Auntie Tammy Smith of Hale Kealoha in Kailua, O'ahu. They graciously donated hearty beef stew bowls accompanied by fruit salad with haupia.

The day began with light breakfast and introduction of participants and volunteers and the contest starting at 9am. After rotating through the three sites, students gathered for snacks and conversation on the various crops growing around the Poamoho Research Station. They were also taught about 'Ohi'a Lehua and its cultural significance and role in primary succession and the implications of Rapid 'Ohi'a Death (ROD) on its ecosystem benefit and survival.

At the close of the contest students of Olomana High School were declared the overall winner and took two of the three top honors for individual high scores. It was a beautiful day in Poamoho and students enjoyed the time together strengthening their observation skills and identifying what systems work best for a specific environment. The understanding of our soil and the



elements around us is crucial for our survival, but more important is the application of that knowledge so that our needs for food production or shelter fall in line with the resources available to sustain that place. When we don't take cues from the environment to guide our planning strategies on the land or sea, the end result can be detrimental. Luckily, with students active in the environment and being educated about its valuable resources, like soil and water we can expect a promising future for Hawai'i.

Mahalo piha a me ke aloha

The O'ahu Soil and Water Conservation Districts are grateful for the opportunity to service our farmers and ranchers to mitigate resource concerns and best manage the soil and water resources of our island home.

The rewarding work we do would not be possible without the support and funding from the Department of Land and Natural Resources, Hawaii Association of Conservation Districts, USDA-Natural Resources Conservation Service, the USDA-Farm Service Agency, and the University of Hawai'i at Mānoa, CTAHR and the cooperators of each O'ahu SWCD that have invested their time and efforts in being pono stewards of the land in Hawai'i.

Mālama pono a me ke aloha,

'A'ohe hana nui, ke alu 'ia
No task is too big when we work together

*The South O'ahu, West O'ahu,
and Windward O'ahu SWCD Board Members
& District Staff*



For more information about
the O'ahu Soil and Water
Conservation Districts

Please visit:

www.oahuswcd.org

Conservation Planning
Assistance and Planner
Information

Please contact:

HACD Conservation
Specialist

1-808-600-2931