

Resource Kona

RESOURCE KONA

Spring 2013

KONA SOIL AND WATER CONSERVATION DISTRICT

Kona SWCD and NRCS Work with Local Ag Producers and Bring 2 Million Dollars to N. & S. Kona.

For the 2012 federal fiscal year, which ended on 9/30/12, the USDA's Kealahou Field Office staff of the Natural Resource Conservation Service (NRCS) and the Kona Soil and Water Conservation District (KSWCD) worked with local agricultural producers to bring nearly two million dollars to North and South Kona through the Environmental Quality Incentives Program (EQIP). This represents 25% of the EQIP funds brought into the entire Pacific Island Area (PIA) by NRCS and it includes not only Hawaii but also the island territories in the western Pacific such as Guam.

North and South Kona agricultural producers and forest land owners entered in contracts in the greatest of numbers for the PIA with a total of 60 out of 78 applications. To date, nearly 25% of those funds have been distributed. The balance will likely be distributed over the next 2-5 years. These funds are distributed as a farmer, rancher or forest land owner completes the installation of the agreed to conservation practice provided it meets NRCS specs and standards. The folks who participate in the program work

very hard installing these practices. Anyone who has spread mulch, laid out irrigation lines or installed a fence will tell you, installing conservation practices can be hard physical work.

There are practices that do not require a lot of labor, Irrigation Water Management for instance. The challenge to this and other management practices is attention to detail and record keeping. There are things farmers should keep records of for their farm business and rainfall is one of them. By tracking your rainfall you can use your irrigation system more efficiently and quite possibly lower your water costs.

Once an installed practice is certified as meeting the required NRCS specs and standards paperwork is processed and cost share dollars are reimbursed (*cont on pg 2*)



The above is what a parcel map looks like with points and tracks downloaded.

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Special points of interest:

- Kona SWCD meetings take place the second Tuesday of the month from 8am-10am and you are invited.
- If you want to learn more about how to protect your natural resources, give us a call, 322-2484 x 100.

The Maui Dirt Devils Heading to Nationals

The Maui Dirt Devils are a group of high school students who have the honor of representing the state of Hawaii at the national Land Judging Contest in Oklahoma in late April to early May. This contest requires students make land use decisions on a parcel of land based on the conclusions they come to after inspecting a soil pit and reviewing some given parameters. The parameters the students are provided for the soil pit, average rainfall, temperature, etc. may or may not reflect the reality of the site. This prevents the home team from having too great of an advantage.

The students have to be able to determine the slope of the land they are working on as well as determine characteristics of the soil such as texture, soil depth, and determine what the major limiting factors of the land are then determine its land use related to agriculture or as a home site. This is how they determine the land use for that parcel. These are all things that not only farmers and ranchers have to have an idea about but many land use and land development professionals as well. The competition the students are participating in takes place in Oklahoma City, Oklahoma. This is a great opportunity to meet other high school students from across the country and to (cont. on page 8)

Kona SWCD and NRCS Bring 2 Million Dollars to N. & S. Kona

(cont from page 1)

to the producer. The reimbursement is not likely to cover all of a producer's costs, it is intended to incentivize the producer to install a practice, learn how it can benefit them and then after the cost share is complete maintain the practice to the standards NRCS sets simply because of continuously realized benefit.

This program provides a direct benefit to the land user who is willing to doing the work in an agreed to time frame and to agreed to standards by helping to cover generally 50-75% of the costs. The program also provides direct and indirect benefits to the community as well. In those 60 contracts are agreements to install fences, irrigation systems, and mulch to name just a few and a lot of this work is actually done or materials are supplied by local companies.



The beauty of native forest with the history represented by the moss covered rock wall.

The huge indirect benefit to the community is the improvement to our natural resources. A farmers who replace an inefficient irrigation system saves themselves money on their water bill but it saves our community water and the energy required to pump it up from the ground. Farmers installing conservation cover or using cover crops are providing the community with the tremendous benefit of erosion control. Ranchers also control erosion by practicing rotational grazing and with pasture and hay planting they help eradicate invasive species.

Hawaii's native forests are beautiful spiritual places and EQIP has conservation practices that can help you restore or improve your forest, even just a small part of it. We believe once you see the success from your efforts you will want to do more and we want to be here to help you.

If you are interested in learning more contact the Kealahou Field Office at 322-2484 ext. 100 and the KSWCD staff will schedule a site visit and a variety of maps can be produced, including a points and tracks map like the one on previous page.

What is the Conservation Planning Process?

The conservation planning process used by the Natural Resource Conservation Service (NRCS) and the state's Soil and Water Conservation Districts (SWCDs) is a 3-phase process and requires participation and commitment from the land user to be successful. The land user has to participate because it is their goals that direct the conservation plan and practices selected for installation.

The first phase of the process is the Data Collection and Analysis phase. The first phase is where resource problems and opportunities are reviewed. A Christmas berry infestation is a problem because they are invasive but it might be an opportunity to create on-site mulch. It is during the first phase that the producer's objectives are identified.

Phase Two is where a Resource Management System (RMS) is formulated and evaluated on its ability to address all of the natural resource concerns for that land. An RMS can address resource concerns the land user does not consider a problem. Someone with a three acre coffee farm might not consider fragmented native habitat a natural resource concern they want to address, and that is perfectly acceptable but an RMS plan would address it. An RMS plan does not need to be complicated, it can simply include mulching and conservation cover in order to address erosion within an orchard, if erosion is the only concern for that land.

Phase three is the implementation and evaluation stage. A plan is implemented then evaluated for its ability to address the existing resource concerns. This is when it is determined if a supplemental practice or practices have to be planned to meet the producer's goals.

NRCS creates contracts with producers to help cover the cost of implementing a conservation plan. The plan and the contract are related but totally separate as well. A contract is based on a plan but always remember they are separate and different things each with its own purpose. The plan's purpose is to protect and improve natural resources. The contract's purpose is to help cover the costs of installing the practice and sets minimum standards to determine if the installation of the practice was done correctly.



The upper left photo is a forestry opportunity. Your plan will provide detailed guidance on forestry projects. Lower left is damage done by feral ungulates, pigs probably. The soil they expose is an opportunity for erosion and as an entry point for weedy species. The center photo is a pasture and hay planting practice, likely to be followed by rotational grazing. The photo on the right is an irrigation mainline. There are opportunities to improve existing irrigation systems.

Mulching as a Conservation Practice

This year the county had to move the bulk of the greenwaste program from the Kealakehe Transfer Station to the West Hawaii Organics Facility at the Pu'uuanahulu landfill. There are space constraints at Kealakehe and there is a cost savings in administering the program with it located in S. Kohala. For North and particularly South Kona farmers who had relied for years on this resource may find it has become too expensive.

The mulch is still free; it is the hauling costs that have increased significantly. The Kona SWCD is aware of local farmers who struggled with the cost of hauling mulch from Kealekehe. The increased costs, even with NRCS cost share funds, have made applying mulch and using it as a resource to build soil simply too expensive. Generally a producer needs 400 cubic yards of mulch per acre of land they want to apply it to and even at 25 cubic yards per delivery that is a lot of deliveries costing \$300 per delivery and sometimes even more..

Mulch does many amazing things. You can create soil from mulch and here in North and South Kona one thing most of our farmers need is soil. Mulch also protects soil from erosion and helps to moderate temperature fluctuations and from drying out too fast. Local farmers will always be able to improve and protect their soil using mulch but it may be time to consider a greater variety of options.

When a farmer considers the cost of hauling the mulch and the potential risk of bringing any number of pests or invasive species on to their land they may be thinking there has to be another way. If water is not a limiting factor cover cropping could provide a lot of organic matter. Depending on the species and the equipment you have to harvest your cover crop you can plan for a more carbon or nitrogen harvest.. Some producers plant fast growing nitrogen fixing trees that are cut down and chipped every two-three years also creating their own mulch. The challenge may be in helping farmers determine where and what they can plant that can later be used as organic matter for soil development.



Upper left is mulch that has been distributed over a small coffee farm to develop soil, to help maintain soil moisture and plant conservation cover into. Lower left, stockpiling mulch and allowing it to compost longer. Upper right, terraces that were back-filled with mulch and lower right, a producer creating mulch using on site green waste.



It is very difficult to create enough mulch for a farm's annual needs on but if it can be done the spread of weedy and invasive species on your farm can be better controlled .

How our farmers, ranchers and forest land owner help our community.

The community owes many thanks to our local farmers and ranchers and not just because they provide us with food to eat but because they are taking care of their land.

With help from the USDA's Natural Resource Conservation Service (NRCS) and their local soil and water conservation district, farmers, ranchers and forest land owners have been removing invasive species, building soil, planting conservation cover, improving their irrigation system, and planting native species just to name a few things they have been up to.

When these land owners work with NRCS to do the work it is generally in the context of a contractual agreement. They agree to install certain conservation practices on their land, according to NRCS specifications and standards and NRCS will help cover the cost of doing the work.

For the federal fiscal year that ended on September 30, 2012, NRCS had entered into 8.2 million dollars worth of contracts within the Pacific Islands Area. This would include the territorial islands in the west Pacific. Of that 8.2 million dollars of contract value the Kealahou Field Office accounts for about 25% of the total. That means over the next few years we will have 2 million dollars pumped into our community. The farmers, ranchers and forest land owners, agree to do the work required to install the practices to meet NRCS specs and standards with their own money. NRCS will review their work and if it does in fact meet the standards NRCS will issue a reimbursement payment to the farmer/rancher or landowner, though it is not a 100% reimbursement.

So there you have it. Our local farmers, ranchers and forest land owners willing to do the hard work on their land, help cover the cost of it, work with the federal government to ensure the work is done to a high standard and bring 2 million dollars into our community. If you ask me, that is the sign of a good neighbor.



A land owner with forest covering their parcel plans to remove the ginger from a portion of their 20 acres parcel. One of the keys to successful forestry is work is fencing to prevent feral ungulate (pigs, cattle, goats) access.



A new coffee orchard where erosion controlling ground cover was established first, then the coffee trees .



A new and more efficient irrigation system that will reduce the amount of water used on this farm.

The language of Natural Resource Conservation

Reviewed by Mike Kolman, Soil Scientist, Soil Survey Office Leader, USDA-NRCS

Editor's Note: From time to time we list terms and their definitions that relate to soil and agriculture. These are terms Soil Conservationists, Soil Scientists and other professionals in the field of agriculture or land use planning might use.

Available Water (moisture) Capacity: This is the capacity of soils to hold water available for use by most plants. *Each soil has its own Available Water Capacity, measured in inches of water per inches of soil and though the number can be very low it is a required piece of information to develop and execute an Irrigation Water Management Plan.*

Crop Residue Management: Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion. *This is what many coffee growers do with their coffee prunings (and to maintain good field hygiene to mitigate the coffee berry borer, minus any remaining coffee cherry).*

Ecological Site Description: An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production. *There have been four ecological sites described for N. and S. Kona. They include the Kona Weather Pattern Wet, Kona Weather Pattern Dry, Kona Dry Forest and the Koa, Sandlewood, Mamane Forest.*

Ephemeral Stream: A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times. *Most of the streams in N. and S. Kona are considered ephemeral streams. The only exceptions are the Waiaha Stream in N. Kona and the Ki'ilea Stream in S. Kona though there are parts of each of these streams that would be considered ephemeral.*

Erosion: The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep. *For soil erosion to occur there must be availability, detachment and transport of soil. Stop one and you have gone to great lengths in mitigating soil erosion. The easiest to stop is availability. If it is not available (covered with mulch or vegetation) it cannot become detached. If it does not become detached it cannot be transported.*

Extrusive rock: Igneous rock, rock that is formed through the cooling and solidification of magma or lava, that is emplaced on the earth's surface. *There is a lot of extrusive rock in North and South Kona.*

pH Value: A numerical designation of acidity and alkalinity in soil. *Acidic soils have pH levels lower than 6.6 and the lower the number the higher the acidity. Alkaline soils have pH levels higher than 7.4 and the higher the number the more alkaline the soil. Soils too high or low in pH can hold onto nutrients and not make them available to plants. Because of this it is recommended soil pH be addressed first if resources to address soil problems are limited.*

Soil Aeration: The exchange of air in soil with air from the atmosphere. Well aerated soil has air that is very similar to the atmosphere, poorly aerated soils is considerably higher in carbon dioxide and lower in oxygen. *Soils that are well drained, as most soils are in North and South Kona, are generally well aerated.*

Soil Complex: A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soil or miscellaneous areas are somewhat similar in all areas. *The Soil Survey Office in Kealahou will be releasing an updated soil survey for the Big Island which will indicate the areas of these soil complexes with data pertaining to all the soil map units present within in the complex.*



For more information, or to apply for any USDA Farm Service Agency program, please call your local USDA Service Center. NOTE: Fees, eligibility requirements, income and payment limitations may apply with any of the programs listed below. Please check with the nearest FSA office for specific rules. The FSA office in Hilo can be reached at 933-8381 ext 1.

Beginning and Limited Resource Loans

Farm Service Agency (FSA) has targeted funds set-aside to assist beginning ethnic and racial minority, and female farmers. Targeted funds are available for both the direct and guaranteed loan programs. Farm Service Agency defines a beginning farmer as a person who:

- Has operated a farm for 10 years or less;
- Will materially and substantially participate in the operation of the farm;
- Agrees to participate in a loan assessment, borrower training and financial management program sponsored by FSA; and
- Does not own a farm in excess of 30 percent of the county's median size.

Each member of an entity must meet the eligibility requirements and loan approval is not guaranteed. Additional program information and loan applications are available at local FSA offices or visit www.fsa.usda.gov.

Preventing Fraud

The Farm Service Agency (FSA) supports the Risk Management Agency (RMA) in the prevention of fraud, waste and abuse of the Federal Crop Insurance Program. Farm Service Agency has been, and will continue to, assist RMA and insurance providers by monitoring crop conditions throughout the growing season. Farm Service Agency will continue to refer all suspected cases of fraud, waste and abuse directly to RMA. Producers can report suspected cases to the FSA office, RMA, or the Office of the Inspector General.

Adjusted Gross Income

USDA and the Internal Revenue Service have established an electronic information exchange process for verifying compliance with the adjusted gross income (AGI) provisions for farm programs. Written consent is required from each producer or payment recipient for the tax review process. No actual tax data will be included in the report that IRS sends to Farm Service Agency.

This process ensures that payments are not issued to producers whose AGI exceeds certain limits. The limits set in the 2008 Farm Bill are \$500,000 nonfarm average AGI for commodity and disaster programs; \$750,000 farm average AGI for direct payments and; \$1 million nonfarm average AGI for conservation programs.

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Board of Directors:
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Monthly meetings are held on the 2nd
Tuesday of the month from 8am-10am
at the USDA Kealahou Service
Center below the post office. All are
welcome and the facility is ADA
accessible.

Organization: The Kona Soil and Water Conservation District (KSWCD) is a government subdivision of the State of Hawaii organized under Hawaii State Law, HRS Chapter 180

Function: To utilize available technical, financial and educational resources to focus or coordinate them so that they meet the needs of the local land users with regards to conservation of soil, water, and natural resources.

Service: The District serves the communities and land users within North and South Kona

Why: The District is committed to the promotion of wise land use and resource stewardship.

Were on the web at

www.kswcd.org

The Maui Dirt Devils Heading to Nationals (cont. from page 2)

see lands and soil that are unlikely to be anything like what the know for soils here. They will learn that though the soils are likely to be different they still have the same characteristics to be judged in order to determine the best use of a piece of land. The Dirt Devils represented Hawaii at Nationals in 2011 and even brought home 3 national awards. Lets help these kids bring it home!

It is never too late to help the with covering the costs of their trip. They are raising funds by selling Maui Pinapples and growing corn that they sell at a local farmer's market. The Kona SWCD has made a contribution to their travel fund and if you would like to as well you can send a check payable to the Central

If You Want To Learn More About Conservation For Your Land

If you want to learn more about what conservation practices will benefit your land please contact your local Soil and Water Conservation District. The Kona SWCD services N. and S. Kona down to the Ocean View area. The Kona SWCD can reached at 322-2484 ext. 100 and are located in the NRCS Kealahou Field Office in the Kona Business Center makai of the Kealahou post office, Building Nine..

The Mauna Kea SWCD offers their services to N. and S. Kohala. They can be reached at 885-6602x 100 and are located in the Waimea NRCS Field Office located at the Parker Ranch Center.

The Waiakea, Puna, Kau and Hamakua SWCDs are all located in the Hilo NRCS Field Office and can be reached at 933-8350 in the Federal Building on Wainuenue Ave.

Remember Hazardous Waste Day in June

Mark your calendar now. Hazardous waste day at the Hilo Recycling and Transfer Station is scheduled for Saturday June 1st and at the Kealahou Transfer Station on Saturday June 8th. For more information check out the website, www.hawaiizerowaste.org