

# Resource Kona

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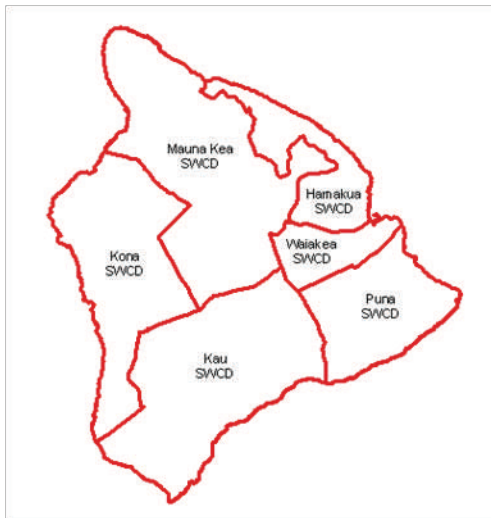
June 2010

KONA SOIL AND WATER CONSERVATION DISTRICT

## What is a Soil and Water Conservation District?

Soil and Water Conservation Districts (SWCD) were born out of necessity during the 1930s Dust Bowl when America's topsoil rapidly eroded. At that time, Congress declared soil and water conservation a national policy priority and enacted the Soil Conservation Act of 1935. This led to the birth of SWCDs in all the states as well as in many territories. All SWCDs are independent units of state government created by each states' legislative branch and approved by their executive branch. SWCDs are responsible for carrying out natural resources stewardship programs at the local level.

The first SWCD created in Hawaii was the Olinda-Kula SWCD on Maui in 1948 and the last was created when the Hamakua SWCD was split off of the Mauna Kea SWCD in 1990. There are 16 SWCDs in the state and they are found on all major islands. Each is governed by an all volunteer five member board of directors. Three directors are elected by local land users and two are appointed.



Of the 16 SWCDs in Hawaii 6 are on the island of Hawaii.

Each director's term last for three years. All of Hawaii's SWCDs are members of the Hawaii Association of Conservation Districts (HACD) and members of the National Association of Conservation Districts (NACD).

In Hawaii we work with farmers who want to develop conservation plans to protect and improve their natural resources, particularly soil and water. With a District approved conservation plan an agricultural producer can obtain an exemption to the permit requirements for grubbing or grading on their agricultural land. It is not an easy way out though, the same requirements for a permit are requirements for a conservation plan. If it involves more than one acre of land, more than 100 cubic yards of soil is to be moved, or if the land will be cut or filled by more than five feet a licensed engineer's plan is still required. An archeological review is also required as part of a conservation plan if grading, grubbing or any practice consider an undertaking is (cont. on pg. 2)

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### Special points of interest:

- If you are doing a tree planting project we have cardboard for you to use to keep the weeds down.
- If you want to become active in the Kona Soil and Water Conservation District please give us a call at 322-2484 ext 100

## **What is a Soil and Water Conservation District?** *(cont. from pg. 1)*

included in the plan. Practices considered undertakings include access roads, Irrigation Regulating Reservoirs (catchment tanks), and lined water ways to name a few. There are other practices that are considered “undertakings” except when installation is non-intrusive such as fencing, and tree and shrub establishment among others.

We also work with agricultural producers who are looking for technical advice on how to improve and protect their natural resources. Some of the common concerns for ag producers within the Kona SWCD are related to soil (Kona soils tend to be very rocky and shallow), pest species, nutrient application, improving wildlife habitats, protecting our groundwater and near shore waters, and finding new sources of energy.

## **Kona SWCD Submits a Request for Funding to the Bureau of Reclamation**

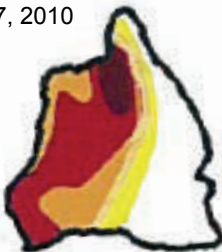
In early May the Kona SWCD had a representative, our Conservation Assistant, attend the County Drought Committee Meeting. At that meeting the attendees discussed the extent of the drought, the problems it is causing for ag producers and existing mitigation techniques. For ranchers destocking is one technique, for orchard farmers, including coffee farms, mulching can help soil retain its moisture.

As of April 27th more than 42% of the Big Island was experiencing drought conditions ranging from severe to exceptional, almost 25% of the island had extreme to exceptional drought conditions, D-3 and D-4 respectively. With the situation this bad there are problems regardless of the mitigation practices observed. As shown below, the drought is beginning to affect the east side of the island.

The attendees learned the Bureau of Reclamation was accepting Requests for Funding for temporary activities that would mitigate the drought. Water hauling was deemed to be an acceptable request for these funds. Our staff sent out an email to our newsletter distribution list advising readers of the request to be submitted and the requirement that to be included your name had to be on the list submitted with the request. In two days our staff was able to create a list with nearly 300 names of people requesting to be included. The funding approval process is underway but it could be November before we hear anything.

We understand there are many more who need this assistance but due to the time constraints were unable to be included. We also understand that having county water does not mean you are not impacted. Local farmers are seeing huge increase in their water bills due to their need to turn on their irrigation system more frequently. We wish we could help everyone who needs it and if we become aware of additional opportunities to assist the community we will take advantage of them.

April 27, 2010



June 22, 2010



### Intensity:

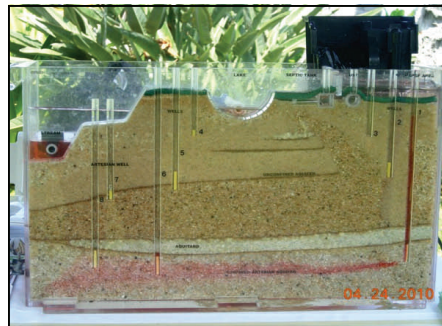


US Drought Monitor (<http://www.drought.unl.edu/dm/monitor.html>)

**Earth Day 2010**

The Kona SWCD was again happy to participate in Kona’s Earth Day Fair. We were also happy to provide an event for the Island Earth Festival, a 4x4 tour of Kealakekua Heritage Ranch. As in previous Earth Day Fairs, the KSWCD used its water model to demonstrate how polluting our ground water can in turn pollute our oceans and surface water, ponds, lakes, streams and rivers. During times of low rain fall or drought ground water will feed surface water, during time of high rainfall or flooding surface water feeds ground water.

Every year for the Earth Day Fair, the Kona SWCD purchases educational material from the National Association of Conservation Districts (NACD). Each year NACD produces educational material on the year’s stewardship week subject. This year the theme was “Healthy Habits = Healthy Habitats”. Their material is designed for elementary school aged children with materials that are age appropriate for grades K-1, 2-3, 4-5 and 6th and up. We were also able to purchase educational materials related to energy that introduced children to what energy is and where it comes from. The pieces include picture puzzles and word games to get kids to think about the world around them.



The top left photo shows the water model with “unpolluted water” and the photo on the top right shows that groundwater can become “polluted” by storm water runoff and leaking underground storage tanks to name a couple of pollution sources, Our “pollution” is red food coloring.



The bottom left photo shows the printed material we had available for school age children and the bottom right photo, taken during the 4x4 tour, shows the saw mill on the ranch in operation.

**Natural Resource Conservation Service EQIP Program**

One of the Natural Resource Conservation Service’s (NRCS) more popular programs here in West Hawaii is their Environmental Quality Incentives Program (EQIP). It is a cost share program where NRCS creates a conservation plan for the applicant. The conservation plan includes practices that address the resource concerns the applicant has regarding their land. The applicant agrees to install some or all of the conservation practices and receives a financial reimbursement upon timely and satisfactory installation of the practice. The reimbursement rates are set for each individual practice and may or may not cover all of the costs for installing the practices. Common conservation practices local producers install include, mulching, conservation cover, cover crop, pest management, nutrient management, tree and shrub establishment, and pasture management, to name just a few.

Applications for EQIP are accepted on a continuous basis though each fall NRCS sets (cont. on pg. 5)

### **NRCS and Hawaii Community College Team-up**

This summer the University Center West Hawaii/Hawaii Community College (HAWCC) offered local residents a two week non-credit course titled Intro to Agriculture. HAWCC Interim Director Beth Sanders obtained a grant from the Office of the State Director of Career & Technical Education. The goal of the course is to introduce students to non-traditional career opportunities. Of course, a side benefit, the students will be better able to grow their own food.

Alleen Texeira was chosen as the instructor. She taught agriculture courses in the California community college system for many years, is a local ag producer and a cooperator with the Kona SWCD. Ms Texeira told the district staff about this great opportunity for the community. The staff asked where the class was to be held and the original plan called for raised beds and hydroponic systems to be created along the edge of the parking lot near their classroom. Our staff immediately saw an opportunity for cooperation and suggested the raised beds and other "lab" work take place in the side yard of the building housing the NRCS Kealakekua Field Office. The NRCS District Conservationist agreed, this was a good idea.

We made sure the landlord was aware, his concern was water use, but he agreed to the idea. It was a win/win. Both Ms Texeira and Ms. Sanders agreed, it was a better place for the "lab" section of the course. Our side yard now has 5 raised beds with a variety of vegetables, herbs and some fruit, some large pots to start dwarf fruit trees and a variety of species growing from seed. The students will also be introduced to hydroponic gardening. Great thanks go to Mathew Bryant for all his hard work preparing the area for the course. He pruned trees, created a border with the rocks he cleared, put the raised beds together, and moved a lot of soil to fill them all.



Top left is Mathew Bryant working on one of the vegetable beds. Top right is the students' seedling and rooting beds. Bottom left shows all five vegetable/herb/fruit beds. Bottom right shows Jessica Sternfels, the District Conservationist for the Kealakekua Field Office educating the students as to what NRCS is, how it came to be and the role NRCS plays in natural resource conservation, education and management

## ***Aloha Jessica, our new District Conservationist***



The Kealahou USDA Field office has welcomed their new District Conservationist, Jessica Sternfels from Petaluma, CA. Jessica has worked for the Natural Resource Conservation Service since 2003 serving the Marin and Sonoma Counties. Prior to that Jessica taught English for a year in Japan and she has a masters degree in soil science that she obtained through the University of Wisconsin, Madison. Jessica is looking for new challenges and hopes to find new and innovative ways to bring NRCS services to our local agricultural community. She has already demonstrated to the staff that she is a team player and can be counted on to pitch in to solve problems.

## ***Kona SWCD Hosting NACD Regional Conference***

The Kona SWCD is hosting the National Association of Conservation Districts' Annual Southwest and Pacific Regions' Conference from September 22-24. The Sheraton Keauhou Bay Resort and Spa is the site of the conference and the Kohala Center is co-sponsoring it with us.

NACD's Pacific Region includes Alaska, Washington, Oregon, Idaho, California, Hawaii and the Pacific Territorial Islands. The Southwest Region includes Wyoming, Colorado, Utah, Nevada, Arizona and New Mexico.

The conference will highlight traditional Hawaiian agricultural and natural resource management systems. They will be compared to western agricultural practices here in Hawaii. The conference is open to local people who want to join us for one day or all three days of the conference. You can register and learn more about this event through the Kohala Center's web site [www.kohalacenter.org](http://www.kohalacenter.org).

## ***Natural Resource Conservation Service EQIP Program*** *(cont. from pg 3)*

a deadline for that fiscal year's ranking cycle. In the past the deadline has been in December and then extended into January or February causing the office to be inundated with applications from local farmers. Because of this very large influx of work some producers are not able to participate because of limited manpower in the office. This year the Kona SWCD staff took the statement "accepted on a continuous basis" to heart and has been meeting with local producers to assist them with the application process. By spreading out the time applications are submitted it is believed more farmers will be able to participate in the program. If you are interested in signing up for the EQIP program, or any other program offered by NRCS, contact us and set up an appointment to complete an application package.

You do need to be able to document that you are an agricultural producer and that you have control of the land for the length of the contract. The length of contracts is totally dependent on what the producer wants to do. If you lease land a "concurrence letter" is sent to the land owner to ensure that the practices will be maintained for the life of the practices, even if the lease holder's lease expires. This does cause problems for some producers. If your lease has 10 years left on it and a practice you want to install has a life span of 15 years the land owner has to agree to maintain that practice for the last five years of its life. Most landowners do not want to make that commitment. There is also paperwork required to determine if a producer meets the Average Adjusted Gross income (AGI) eligibility requirements.

If you are interested in learning more about EQIP, or you want to apply to the program, contact the Kona SWCD for assistance at 322-2484 ext. 100.

## **Soils of the Kona District** *By Chelsea E. Hansen, Soil Scientist Trainee, USDA-NRCS*

Editor's Note: "The Soils of the Kona District" is a reoccurring column which will highlight the many different soil types within North and South Kona their use and management.. In this, the third column of our series, Chelsea E. Hansen, a Soil Scientist Trainee, discusses the Punaluu soil series.

The Punaluu soil series consists of very shallow, well drained organic soils (see photo 1). The soils formed mainly in organic material consisting of decomposed leaves, twigs, and wood; and to a lesser degree basic volcanic ash, cinders, and weathered lava. Punaluu soils are found on leeward slopes of Hualalai and Mauna Loa volcanoes at low elevations ranging from sea level to 305 meters (0 to 1000 feet). These soils are located in depressions of nearly level to moderately steep pahoehoe flows that are 1,500 to 3,000 years old. The mean annual rainfall ranges from 510 to 1270 millimeters (20 to 50 inches), with most of the rainfall occurring from April through October. The mean annual pan evaporation ranges from 1020 to 2030 millimeters (40 to 80 inches). The mean annual air temperature ranges from 21 to 24 degrees C. (70 to 75 degrees F.)



Photo1 Right, Punaluu- Pahoehoe complex. The surface layer is black, highly decomposed plant material over pahoehoe lava. Pahoehoe lava outcrops make up about 40 percent of surface.

The Punaluu soils are used mostly for grazing lands, but some areas are used for orchard crops (see photo 2). This soil consists of a thin layer of dry organic material over pahoehoe bedrock. Low rainfall, high evapotranspiration, and very shallow soil depth result in frequent droughty conditions. Success of seedling germination is limited to spring or summer. Phosphorus retention is moderate to high, however available levels of P are likely to be low.

It is recommended that a soil test be performed to evaluate nutrient levels of the soil in orchards. For more information on soils tests visit the University of Hawaii, Cooperative Extension Service in Kainaliu.

When this soil type is cleared of vegetation, pahoehoe lava outcrop and organic (Cont. on pg 8)



Photo 2. Above, Punaluu soils used for papaya, coffee, and macadamia nut orchard crops. Note the drip irrigation system under healthy papaya trees.



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 Kealahou can be reached at 322-2484 ext 111.

### **ECP**

Farms and ranches experiencing severe drought conditions may be eligible for cost-share assistance under the Emergency Conservation Program (ECP). This disaster program provides cost-share assistance if the damage is so severe that water available for livestock, orchards, or vineyards has been reduced below normal to the extent that neither can survive without additional water. The Hawaii County FSA Office has announced that two ECP practices are available to ranchers and other producers on the island. Areas of consideration are Pahala, Naalehu, South Point, Kona Districts, South Kohala District to include Mana, and up to the PTA areas. Requests for assistance will be accepted at FSA County Office in Hilo and Kealahou until **July 13, 2010**. Only the applications that are received by this date will be considered.

### **TAP**

The Tree Assistance Program (TAP) provides financial assistance to qualifying orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes, and vines damaged by natural disasters occurring on or after January 1, 2008, and before October 1, 2011. Please see your nearest FSA office for eligible tree types and all producer eligibility requirements. The final date to submit an application and supporting documentation for calendar years 2008, 2009 and January 1 thru May 7, 2010 is **July 6, 2010**.

### **LIP**

The Livestock Indemnity Program (LIP) provides financial assistance to producers for livestock deaths that result from natural disaster. LIP compensates livestock owners and contract growers for livestock death losses in excess of normal mortality due to adverse weather, including losses due to hurricanes, floods, certain diseases, wildfires, extreme heat and cold. Eligible losses must be documented with FSA within 30 days of the death being apparent. Note that VOG has been approved as a qualifying event; but drought is not a qualifying event.

### **CREP**

FSA continues to accept applications for the Hawaii Conservation Reserve Enhancement Program (CREP). Through CREP, program participants receive financial incentives from USDA and the State to voluntarily remove land from agricultural production and convert the land to native grasses, trees and other vegetation.

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Kealahou, HI 96750  
322-2484 ext. 100  
Fax: 322-3735

Board of Directors:  
Chairman: Rick Robinson  
Vice Chairman: Greg Hendrickson  
Secretary: Virginia Isbell  
Director: William "Skip" Cowell  
Director: David "Kawika" Marquez

Staff: Mary Robblee, Conservation  
Assistant  
Monthly meetings are held on the 2nd  
Tuesday of the month from 7am-9am  
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](http://www.kswcd.org)**

### **Soils of the Kona District** *(cont from pg 6.)*

material becomes exposed, increasing the likelihood of erosion. Erosion can be expected if the soil is cleared and located on a slope that exceeds 12 percent This soil exhibits hydrophobicity, which can cause reduced water infiltration, therefore increasing runoff and erosion. Hydrophobicity is greatly accentuated if soil is cleared of vegetation and allowed time to air dry. In orchards, it is recommended to apply an efficient irrigation water management system and conservation mulching practices that will help to increase the organic matter content and improve the water holding capacity of the soils. For more information on irrigation water management and conservation mulching practices, visit the USDA-NRCS Service Center in Kealahou.

### **The Rainy Season is Upon Us, Hopefully**

The rainy season for West Hawaii is from March to October, the dry season for the rest of the state. It is everyone's hope the drought breaks soon and rainfall levels return to some semblance of normal.

This is good opportunity to clean out any water courses that run through your property to help prevent localized flooding in the event of a major rainfall. Remember you are responsible for keeping watercourses on your property clear of debris. The material that collects in our watercourse has, in the past, blocked culverts or created a debris dam which causes the water to jump from the water course and create new ones where they never where before.

Because so much of Kona's landscape is only a few thousand years old, as opposed to tens of thousands years old, our watercourses are not well developed. One of the most important things you can do to prevent flooding damage to your down stream neighbors is to keep your portion of a watercourse free of debris.

Even if water hasn't flowed through a watercourse in years does not mean it won't sometime in the future. Protect yourself and your neighbors by keeping your watercourse clear of debris.