

# Resource Kona

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March 2009

KONA SOIL AND WATER CONSERVATION DISTRICT

## On A Clear Day



This picture was taken from the parking lot of the USDA's Kealakekua Service Center at 81-948 Waena'Oihana Loop, Kealakekua, Elevation, approximately 1440'. The picture was taken on Friday, Dec. 12<sup>th</sup> at 7:15 am, the morning after a day of heavy rain that saw destructive flooding on Kauai and Oahu. Using mapping software available to the office staff we believe the land masses in the distance are, from left to right, Oahu, Molokai and West Maui.

## Kona Hema Field Day, The Nature Conservancy Tour

During early February the Kona SWCD staff, along with the NRCS staff had the incredibly fortunate opportunity to tour The Nature Conservancy's Kona Hema Preserve. This parcel is just over 8,000 acres and includes land in the Pāpā, Honomalino and Kapu'a ahupa'a. Other participants included members of the USDA's Forest Service staff, staff and graduate students of University of Hawaii as well as some ranchers considering silviculture and existing silviculture producers. The tour was primarily to discuss the research results of ongoing experiments related to growing koa as a viable crop and the out-plantings of native understory species that provide a food source for fruit-eating birds such as the Hawaiian Crow, the 'Alala, an endangered species. The understory plantings have been very (go to page 5)

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Do you have an idea for an article?  
Contact us at 322-2484 ext. 100

### Special points of interest:

- Do you want to learn more about conservation on your land? Give us a call.
- If you want to become active in the Kona Soil and Water Conservation District please give us a call at 322-2484 ext 100

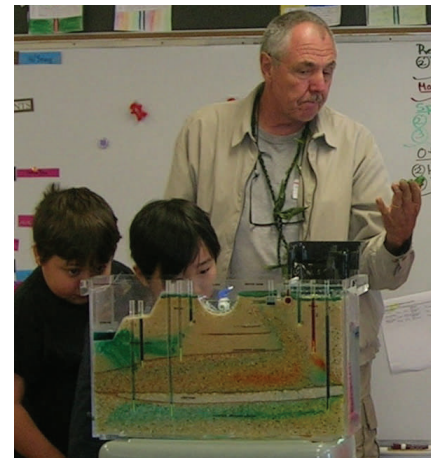
## Water Model Demonstrations at local schools

The Kona Soil and Water Conservation District has a water model that we take out on the road to local schools. We are able to demonstrate the water cycle and the role groundwater and aquifers play within the cycle. The back of the model holds about four and a half gallons of water and represents the ocean. There is a pump that cycles the water from the back to the front representing the action of precipitation and creates the cycle the water flows through. Food coloring is the “pollutant”.

So far this year we have done the demonstration for the fourth grade science classes at Holualoa Elementary School. Mrs. Hale, their teacher, asked us to provide this demonstration last year and it was so successful she asked if we could return this year.

We have also provided the presentation to first graders at Konaweana Elementary School where we were able to capture the attention of 40 six year olds for an hour.

Our latest demonstration was to the fifth/sixth graders at Innovations School this year and we hope everyone found it worthwhile enough to invite us back next year.



Above left: The Kona SWCD water model shows “pollution” in the groundwater and how it flows through an aquifer.

Above right: Some of the students are looking at the back of the model where the “ocean” is and below right some students are watching our “pollution” cycle all the way through.

## Celebrating GIS Day

Contribution by Reese Libby, Geographer, Waimea USDA Field Office

Late last year the GIS community celebrated GIS day around the globe. On the big island of Hawaii there were two celebrations. One was in Kailua-Kona and another at Volcano's National Park.

The Kona event was held at the old pavilion at the county of Hawaii old airport park. The event centered on a Geocaching hunt to provide students interaction with the GIS Community as well as incorporating GPS, anthropology, science, geology and career opportunity in this new technology.

There were 2 sessions, one starting at 9am and the other one starting at 12:30. There were 5 schools represented at the event with a total of approximately 300 students. The main sponsor was the county of Hawaii, and there were 10 other supporting agencies and community organizations.

We had four volunteers from NRCS/Kona SWCD help in participating in the event. The volunteers were Mike Kolman (Soil Scientist-Kona), Patra Vidondo (Soil Conservationist-Kona), Mary Robblee (Conservation Assistant-Kona SWCD) and Reese Libby (Geographer-Waimea). We had a lot of fun to teach the students and the teachers the importance of GIS/GPS and how it affects us on our daily lives while working at our jobs and spreading the NRCS mission of natural resource conservation. ESRI is also a sponsor to this event and the Hawaii State Department of Education is real close to a licensing contract agreement with them for the whole school system in the state. Hopefully by next year most of the students will be working with ArcGIS 9, ArcExplorer and GPS units as a tool in their classrooms. Many of the teachers are science teachers and can see the applications of GIS in the students' science projects. This is an important tool that they will need for their future.

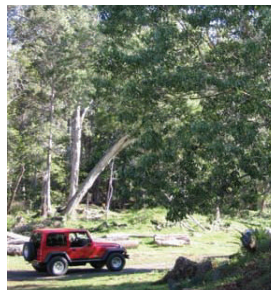
Today, GIS is a multibillion-dollar industry employing hundreds of thousands of people worldwide. GIS is taught in schools, colleges, and universities throughout the world. Professionals in every field are increasingly aware of the advantages of thinking and working geographically.



To the left Patra Vidondo explains to students how she uses GIS technology in her job as a Soil Conservationist and to the right Mike Kolman explains to another group of students how he uses it as a Soil Scientist.

### Kealakekua Heritage Ranch Tour, Education Series

Every year, as part of the Kona SWCD's Educational Series, we sponsor 4x4 tours of various parts of the North or South Kona districts that most people rarely, if ever, have an opportunity to visit. In the past we have sponsored tours of the summit of Hualalai Volcano and the Puuwaawaa cinder cone. This year, on May 2nd, in conjunction with the Earth Festival we are sponsoring a tour of the Kealakekua Heritage Ranch. We have done the tour in the past and people feel very fortunate to have the opportunity to witness the beauty of Kona's mauka lands. The fee for the tour is \$75 and covers lunch and beverages with your meal. You can even use your own 4x4 vehicle but you are not required to. The income received from the Education Series helps the district to continue its educational outreach. Just this past month the district provided Kealakehe Intermediate School funds to start a garden project. To reserve a seat or for more information please contact Mary at the District office at 322-2484 ext. 100



**Kona Hema Field Day** (cont. from page 1)

successful with most failures due to incorrect planting and placement, too much sun.

Scarification of former pasture land does work to bring up koa seedlings after logging. Though you do not need to apply herbicide to surrounding grasses the seedlings do much better if you do. Imazapyr tested well to remove the grasses and not harm the koa. Koa is a legume and imazapyr is known to have minimal effect on the legumes in general.

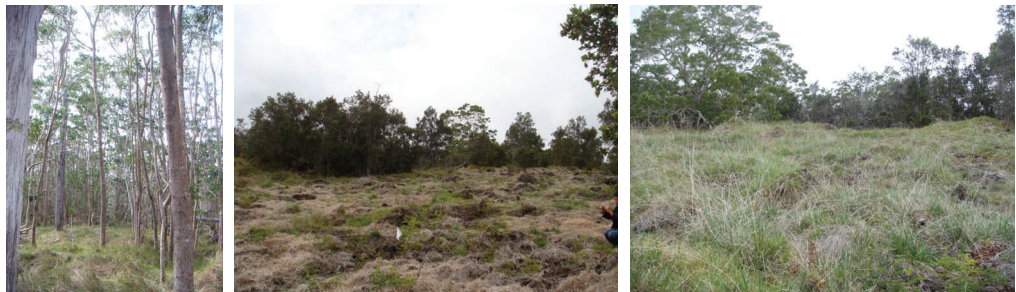
In one un-thinned 25 year old tree stand the more space the trees were given through recent thinning the faster they grew and control of grass under those trees had no effect.

Overall the trip was a great opportunity to see what types of scientific research is going on right in our own back yard, so to speak. This type of research is the only way to determine the best management practices that will benefit the forest, the land owner and the community. Being able to responsibly harvest the bounty of the forest will help the forest remain just that, a forest. We may also be able to realize the added social and economic benefit of providing jobs and maybe even make the islands a little less dependent on the rest of the world to meet our needs.

To the right, a stand of koa trees.

Center, a scarified area treated with the herbicide imazapyr.

Far right, a scarified area not treated with herbicide.



**Kealakehe Intermediate School Starting Up A Garden Project**

Last summer the Western Sustainable Agriculture Research and Education (WSARE) group had a conference in Keauhou. Our staff attended and was quite excited by the ideas and principles put forth. This excitement caused our Conservation Assistant, Mary Robblee, to contact Alex Logan of the Family Support Service's Youth Development Program about his efforts to initiate a teen center for Kealakehe Intermediate School students after reading an article from West Hawaii Today. She wanted to know if a garden would be an activity made available for the kids.

Alex introduced Mary to Daniel Benner who supervises the Na Kahumoku program. Na Kahumoku, Hawaiian for Keepers of The Island, is a youth leadership movement which raises environmental awareness within itself and in the community through perpetuating sustainability on the island through hands on work.

Daniel was working with Nancy Redfeathers of the Kohala Center to start a garden project at the school. After meeting with them Mary approached the Kona SWCD Board of Directors for a contribution to match the Kohala Center's donation. The Board of Directors approved the motion unanimously and now, partly in thanks to the Kohala (cont. on pg 6)

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Board of Directors:  
Chairman: Rick Robinson  
Vice Chairman: Greg Hendrickson  
Treasurer: Fred Cowell  
Secretary: Virginia Isbell  
Director: William "Skip" Cowell

Staff: Mary Robblee, Conservation Assistant

Monthly meetings are held on the 2nd Tuesday of the month from 7am-9am at the USDA Kealakekua Service Center where our office is located. All are welcome and the facility is handicap accessible.

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

### **Rainy Season Is Almost Upon Us, Make Sure Your Watercourse is clean**

We all know the dry season in Hawaii is from, generally, March to October. Well every where but here in West Hawaii. West Hawaii's weather is a little different because of mountains that surround us. In the summer the sun heats up the mass of land that is this island. That air then rises following the laws of physics. Cool ocean air, filled with moisture, comes in to take its place. By late afternoon the cool moist air is becoming warm moist air and rises forming clouds. As the clouds continue to rise in elevation they meet with and mix with cooler air. Cool air cannot hold as much moisture as warm air so it rains, sometimes very heavily.

To help these sometimes heavy rains flow down the mountains safely please keep any watercourses on your property cleaned out. Please do not use our watercourses as a place to throw anything. Do not throw your yard waste into them, do not throw hazardous waste into them, do not throw old appliances in them, do not throw old tires and bikes into them. To do otherwise could be setting your downstream neighbor up for a disaster they may not recover from.

Help your neighbor out, check your waterway for debris and remove it. Allow the water to flow down the mountain. It is something you can do for your community and actually help your neighbor financially. A disaster averted is a lot of money saved.

### **Kealakehe Intermediate School Starting Up A Garden Project**

(cont from page 5)

Center, the Kona SWCD and even the WSARE conference, Daniel can purchase the supplies needed to help his students learn through hands on efforts that by respecting the land the land can sustain them.