



RUNOFF

CALIFORNIA-NEVADA CHAPTER SWCS –SUMMER 2016

PRESIDENT'S MESSAGE – JOE WILLIAMS



Hello Fellow Chapter Members!

We are a few short days from our annual 2016 tour and meeting which will take place in **Jackson, CA** on **September 27th and 28th**. Jackson lies within the beautiful Sierra Nevada's of California. For those of you that don't know, the Sierra Nevada Region plays a critical role in California's water supply and hydrological system where more than 60 percent of California's water supply originates.

The Sierra Nevada forests and meadows play a crucial role in water quality and quantity for the state. We will explore this diverse area through our theme of "*Building Healthy and Resilient Ecosystems in the Sierra Nevada Watershed*".

Areas of emphasis for the meeting will include tree mortality, forest ecology, watershed health and resilience, fire ecology and biomass utilization.

The two day conference will start with a full day field trip featuring onsite presentations from local and regional experts. These site visits will give participants an opportunity to see and experience wildland fire impacts and post-fire restoration on federal and private lands, as well as rehabilitation and restoration on California State lands.

The second day of the conference will bring noted speakers in the fields of forest entomology, forest ecology, biomass utilization and challenges facing the industry, forest restoration and forecasting methods for reducing wildfire potential. The conference lunch session will include Chapter awards and announce our annual scholarship award winner. The agenda is full of diverse, yet interlinked topics related to our theme this year. Please plan on joining us.

NEW CHAPTER MEMBERS

We extend a **GREAT BIG WELCOME** to four new members who recently joined our California-Nevada Chapter SWCS. We had 92 members as of September 8, 2016.

Rachael Bryson - Oroville

Gabrielle Lawson - Grass Valley

Pamela Hertzler - Grass Valley

Diana Waller - Modesto

71ST SWCS INTERNATIONAL ANNUAL CONFERENCE

Chapter Executive Council Director **John McCann** announced that the **Nevada Creeks and Communities Team** received the SWCS Merit Award on July 26 at the SWCS International Annual Conference awards luncheon in Louisville, Kentucky. They were nominated by John who is a USFS Forest Hydrologist assigned to the Humboldt-Toiyabe National Forest and stationed in Sparks, NV.

CHAPTER ANNUAL CONFERENCE TO BE HELD IN JACKSON

BUILDING RESILIENCE AND HEALTHY ECOSYSTEMS IN THE SIERRA NEVADA WATERSHED



Starts on Tuesday, September 27 at 10 am with an all-day **Field Tour** and a **General Session** starting at 8 am on Wednesday in the **Amador County Agriculture Building** located at **12200-B Airport Road in Jackson, CA** that concludes at 3 pm.

Day 1-Morning tour themes on the Coach Field tour that leaves from the Amador County Agriculture Building parking lot at 10 am include:

Post wildfire erosion control from Butte fire, helicopter mulching, and managing tree mortality presented by Beth Brenneman, Peggy Cranston, and Jeff Babcock from BLM.

Lunch break and discussion with Cal Fire representatives Gary Whitson, Matt McNichol, and Sergio Campos on the benefits of thinning and competing vegetation control.

Afternoon tour themes are:

Rehabilitating Fire-fighting Damage and Forest Harvest presented by **Karl Graves** from USFS at the Arnold Rim fire area and

Reforestation and Meadow Restoration presented by **Cal Fire representatives Nathaniel Wigington and Joe Harvey** at the Calaveras Big Trees Park.

Dinner on your own - see restaurant listings at <http://www.touramador.com/dining/restaurants>

7:00 pm. Chapter Business Meeting at the Bella Rosa Banquet Room – 36 Main Street in Sutter Creek

DAY 2- Sept. 28 General Session in the Amador County Agriculture Building at 12200-B Airport Road.

7:30 - 8:00 am Registration and Continental Breakfast

8:00 - 8:30 am Keynote Address: **Challenges facing the Sierra Nevada Watershed - Danny Cluck** - Forest Entomologist – USFS

8:35 - 9:15 am **Implementing resilient treatments in forested landscapes - Tom Esgate** - Managing Director Lassen County Fire Safe Council

9:20 - 10:00 am **The future of biomass plants in addressing the challenge of dead and dying tree removal - Julee Malinowski**, CEO, California Biomass Energy Alliance

10:00 - 10:15 am Coffee break

10:15 - 10:50 am **Restoring our Forests...What's Standing in the Way?** - **Mike Albrecht**, President, Sierra Resource Management Inc.

10:55am - Noon Panel Discussion - **Improving outcomes with restoration in the Sierras**

12:00 - 1:00 pm **Complementary lunch and CA-NV Chapter Awards and Scholarship Award**

1:05 - 1:45 pm **Forecasting methods for reducing wildfire potential - Gina McGuire**

1:50 - 2:30 pm **The Mokelumne restoration experience**

2:35 - 3:00 pm Conference conclusion

Lodging - Registration fee does not include lodging. We recommend staying at the following:

Jackson Rancheria and Casino

12222 New York Ranch Rd
Jackson, CA 95642
800-822-WINN

Holiday Inn Express

101 Clinton Rd
Jackson, CA 95642
(209) 257-1500

Best Western

200 S State Highway 49
Jackson, CA 95642
(209) 223-0211

Registration can be made at the door (cash or check) or by credit card via Eventbrite at:

<https://www.eventbrite.com/e/building-resilience-and-healthy-ecosystems-in-the-sierra-nevada-watershed-tickets-27262868975> and Click on TICKETS

Day 1 field tour including lunch is \$60.

Day 2 conference including continental breakfast and lunch is \$150.

Where can I contact the organizer with any questions? Please contact **Ladi Asgill** at (209) 604-6554

Chapter Executive Council Director **John McCann** announced that he set up a LinkedIn group for the Chapter. He has posted information about our meeting there. You can find the group here:

<https://www.linkedin.com/groups/12001951>

Annie Binder, Publications Director, Soil and Water Conservation Society, has posted our CA-NV Chapter upcoming conference September 27-28, 2016 information at

http://www.swcs.org/index.cfm/6404/81177/canv_chapter_building_resilience_and_healthy_ecosystems_in_the_sierra_nevada_watershed

A Call to Action to Save One of America's Most Important Natural Resources

BY JO HANDELSMAN and PARKER LIAUTAUD

The White House Office of Science and Technology Policy (OSTP) issued a national Call to Action on August 1 and is forming an interagency group to protect America's soil. Soil plays critical roles in food security, climate mitigation, ecosystem function, and buffering against extreme weather events. Although it is essential for the stability of the planet, soil is disappearing at an alarming rate.

In the United States, estimates are that soil on cultivated cropland is eroding at an average rate of 5.2 tons per acre per year, while the average rate of soil formation falls between 0.008 and 0.51 tons per acre per year. Some parts of the Midwest are losing soil at a much faster rate, especially during extreme weather events—in some regions of the United States, erosion has been measured at over 100 tons per acre in a single storm. That means that a layer of soil that took over 350 years to form was destroyed in a single day.

Climate change is expected to increase pressure on soil as the frequency of extreme weather events increases, bringing forceful rain and flooding, which can strip away soil. Without coordinated action, the United States is on track to run out of topsoil—the medium upon which crop production depends—before the end of the 21st century.

OSTP seeks innovative actions from Federal agencies, academic scientists and engineers, farmers, entrepreneurs, businesses, advocates, and members of the public in a nationwide effort to impede soil loss, enhance soil genesis, and restore degraded soils. Under the **National Science and Technology Council**, OSTP has established the **Soil Science Interagency Working Group (SSIWG)**, which will receive technical input from 15 Federal departments and agencies. This input will include identifying knowledge and technology gaps, identifying research and conservation priorities, fostering public-private collaborations, and working toward Federal actions to protect soil resources. OSTP welcomes efforts to develop or deploy solutions or incentives to achieve the following: (1) rapidly generating healthy soil or restoring degraded or contaminated soil; (2) increasing soil carbon content and sequestration; and (3) reducing pressure on agricultural soil that is particularly vulnerable to erosion. *****

Jo Handelsman is Associate Director for Science in the White House Office of Science and Technology Policy

Parker Liautaud is Policy Advisor for Natural Resources in the White House Office of Science and Technology Policy

CASI / UCCE / NRCS DISCUSS CALIFORNIA FARM DEMO NETWORK WITH DOUG KARLEN

By Jeff Mitchell, photo by Jeff Mitchell

Eight folks from NRCS, UCCE, and CASI (Conservation Agriculture Systems Innovation) Workgroup met with Dr. **Doug Karlen** of the USDA ARS National Lab for Agriculture and the Environment in Ames, IA on July 1st on the UC Davis campus to discuss the California farm demonstration network and to get ideas for improving the network as we move forward. Karlen is a distinguished soil scientist at the National ARS Lab and has contributed a very large amount of research during his illustrious career to a range of soil quality topics and efforts. He is a Fellow in each of the Tri-Societies, - the American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America, and was also one of the very first scientists to begin discussion and work on the concept of soil quality, or more recently, the area of soil health.

Karlen and Susan Andrews, who worked with him as a Post-Doc ecologist for several years before leading the early formation of the Soil Quality Institute with NRCS, have done quite a lot of work in California on soil quality and published several research papers on work they collaborated with California scientists on the topic based on work conducted in Five Points and Davis.

Upon being introduced to our California farm demo network and its goals, Karlen offered a number of insights based on his own experience and familiarity with efforts similar to ours in other states.

1. reach out to representatives in different areas that may have interest in what we're doing ("systems enhancement")
2. make sure we emphasize "baseline, baseline, baseline" information gathering and data collection
3. consider very carefully and thoughtfully how data generated from the effort will be organized, archived, available in a database (there are a variety of data entry templates that Doug will send us leads on)
4. consider approaching key private sector potential partners such as Monsanto (as in the Midwest Soil Health Partnerships effort)
5. consider partnering closely with appropriate ag-related groups and entities who can do better at 'driving' information events and at generating farmer participation and turnout
6. consider involving what Doug termed "short-line" manufacturers in our programs and events (not necessarily the mega-companies, but smaller, affiliated companies)

Following the focused discussion, several folks continued their discussions with Karlen for a luncheon by the NRCS State Office in downtown Davis.

We thank **Doug Karlen** for taking time to meet and talk with us. It was most productive and insightful for us to talk with him.

Jeffrey P Mitchell Ph.D. is a CE Cropping Systems Specialist stationed at the Kearney Agricultural Research & Extension Center in Parlier, CA.



Participants included NRCS District Conservationist and Chapter Executive Council Director **Phil Hogan** from Woodland (back row on left), NRCS Conservation Agronomist and Chapter Executive Council Director **Zahangir Kabir** from Davis (third from right), CE Stanislaus County Farm Advisor **Marsha Campbell** from Modesto (second from left), and Dr. **Doug Karlen** of the USDA ARS National Lab for Agriculture and the Environment in Ames, IA (front center).



LESSONS FROM SIX CALIFORNIA SOIL CARE FARMERS

By Jeannette E. Warnert. Posted on July 21, 2016

Despite the growing interest in soil health in many parts of the country, the notion hasn't captured the imagination of most farmers in California. The Golden State's lackluster attention to soil care is likely due to “phenomenal yield increases over the past several decades, the sheer diversity of cropping systems, and widespread perception that California's environment and crop production mix doesn't lend itself to soil health improvements,” said **Jeff Mitchell**, UC Cooperative Extension agronomy specialist.

Firebaugh farm manager Jesse Sanchez speaks at a soil care demonstration.

A series of farm visits this summer in the Central Valley prove this rationale wrong, Mitchell said. The farm visits were sponsored by the UC Conservation Agriculture Systems Innovation Center (CASI), USDA's Natural Resources Conservation Service and the California Association of Resource Conservation Districts. The farm visits showcased the soil health goals and experiences of six farmers who are familiar with soil care principles across a wide range of local cropping contexts.

The series of visits demonstrated the use of no-till and minimum tillage farming, cover cropping, enhancing the diversity of above-ground species and underground soil biology, surface residue preservation, and compost applications.

John Teixeira is a diversified farmer in Firebaugh working to develop integrated crop and livestock systems that are not reliant on external inputs. Pursuing a diverse rotation that includes alfalfa, cover crops, and a variety of heirloom grain crops that are marketed as both raw seed and value-added pasta, Teixeira is working to enhance soil function and fertility so that all external impacts are eliminated.

Michael Crowell and his son Adam grow silage crops near their Turlock dairy and dryland small grain crops using no tillage along Highway 4 in the rolling hills south of Dixon. They use no-till as a means to reduce soil water evaporation and to increase the water holding capacity of their soil, thereby enabling them to produce economically viable crops on the region's typical 14 inches of winter rainfall.

Darrell Cordova and his son Trevor of Denair also use no-tillage for their summer silage corn and winter small grain forage mixes and as a means for stabilizing the soil, adding surface residues, increasing infiltration and reducing runoff under their center pivot-irrigated crops growing on undulating terrain. These practices also cut costs and eliminate considerable labor.

Tom Willey of Madera uses compost applications ahead of each of his organic vegetable crops to build the nutrient-provision and water-holding capacities of his soils. His sustained dedication to these amendment applications and his farming goal of attempting to mimic natural systems in terms of active, high-functioning soil biology enable him to produce a great diversity of very high quality vegetables.

Alan Sano and Jesse Sanchez in Firebaugh have combined the conservation ag/soil care practices of reduced disturbance and cover crops for more than 10 years in their processing tomato fields. They report lower costs, improved soil tilth, and the ability to reduce nitrogen fertilizer inputs by about half.

“These six soil care farmers share an uncommon dedication to the principles that are at the core of soil health and conservation agriculture systems,” Mitchell said. “Each of them reported tangible value that they are receiving from their attention to caring for the soil and working to improve soil function.”

Mitchell and the network of organizations that are part of CASI now seek a new wave of farmers who are interested in evaluating conservation agriculture, climate-smart practices at their farms. Additional farm demonstration evaluations are being established and we hope to have more opportunities to share this work in the near future. If you are interested in becoming involved with the farm demonstration network, please contact us at (559) 303-9689.

For information on how to become involved with farm performance monitoring and the educational activities, see the CASI website at <http://casi.ucanr.edu/>

APPLICATIONS FOR 2017 SCHOLARSHIP NOW ON WEBSITE

Chapter Scholarship Chair **Tina Vander Hoek** is pleased to announce that undergraduate college students can download the 2017 scholarship application from our website at www.caswcs.org. Completed application with supporting materials must be postmarked by February 1, 2017. The \$1,000 scholarship will be awarded before the Fall Semester/Quarter of the 2017-2018 school year. Tell your family and friends about this scholarship.

Our annual scholarship is provided to encourage undergraduate students interested in soil and water conservation, to obtain technical expertise, and to pursue careers in soil and water resources. Applicants must (1) have successfully completed two years of study at an accredited college, (2) be enrolled in an undergraduate curriculum related to soil and water resources, and (3) have a cumulative grade point average of 2.5 or better on a 4.0 scale.



2016 California-Nevada Chapter SWCS Scholarship winner – Aldo Garcia

Aldo is in his junior year at Fresno State majoring in Plant Science, and is the first member of his family to attend University

Activities include: He is a FFA Field Day Committee member, a member of the campus Plant Science Club, Plant Health Society, and the campus Louis Stokes Alliance for Minority Participation (LSAMP). He has volunteered for the Juvenile Diabetes Research Foundation’s fund raiser, and various other community events and activities, and has spoken at a Project 180 event for at risk youth and adults.

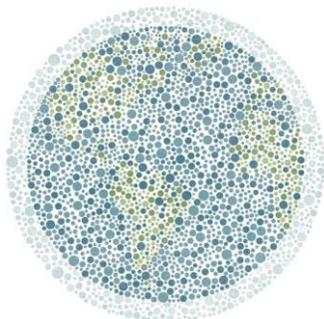
Aldo has been working summer internships to gain experience in plant science and the field of soil and water conservation.

Awards –Received California Irrigation Institute Scholarship to attend 2016 conference. He transferred from Bakersfield College, and was on the Dean’s List fall of 2015, his first year attending Fresno State.

First recommendation - Associate professor at Fresno State, states that Aldo demonstrated a genuine interest in his Vegetable Crop Production course by making significant contributions to the class’s critical thinking discussions, and has displayed the qualities of a very good team player in the campus Ag community. The instructor further stated he was impressed with Aldo’s work ethics, his attitude towards his studies and interest to conduct undergraduate research. “Aldo demonstrated a willingness to excel in any task assigned to him”.

Second recommendation - Assistant professor at Fresno State for irrigation water management, mentioned that Aldo was one of the few undergraduate students she has met who have shown so much interest in soil water conservation and management. “He excelled in all written assignments and actively participated in class discussions, is very conscientious, hard-working, and motivated”.

Aldo stated he wishes to pursue a career in soil and water conservation.



THE SOIL STORYHOME

The Soil Story - a short film about the power of healthy soil to reverse climate change. Help us tell this story to the world

<http://thesoilstory.com>

LEGISLATURE ESTABLISHES HEALTHY SOILS PROGRAM TO AID FARMERS

POSTED: 09/01/16 BY **THE REPORTER** NEWS

The California State Legislature voted on August 31 to establish a \$7.5 million Healthy Soils Program to support agricultural practices that reduce greenhouse gas emissions and store carbon in soil, trees, and plants. The bill now goes to Gov. Jerry Brown for his signature.

Language to establish and fund the Healthy Soils Program from Senate Bill 1350 by State Senator Lois Wolk, D-Solano, was included as part of the Cap-and-Trade funds bill approved on September 1.

“By providing farmers and ranchers with greater access to programs and other resources, the state will not only help agriculture adapt to climate change but will also help this sector play an important role in addressing climate change by reducing their greenhouse gas emissions and storing, or sequestering, carbon in the soil,” Wolk said. “I thank the Governor and legislative leaders for their support of this effort.”

Senate Bill 859 will establish a Healthy Soils Program to support projects that reduce greenhouse gas emissions from agricultural operations and increase carbon sequestration, or storage, in agricultural soil. Benefits to increased health of agricultural soils include the ability to store more carbon and other greenhouse gases through sequestration, provide more nutrients for plants, retain more water, and reduce erosion resulting in improved air and water quality, water conservation, enhanced wildlife habitat and healthy rural communities.

The proposed program would provide support such as loans, grants, research, technical assistance, educational materials and outreach to farmers whose management practices contribute to healthy soils and result in net long-term greenhouse gas benefits.

SB 859 was passed alongside another measure appropriating \$7.5 million in funds from the state’s Greenhouse Gas Reduction Fund (GGRF) to set up the program, which would be operated by the California Department of Food and Agriculture. Wolk’s effort to establish the Healthy Soils Program is supported by groups including the California Climate and Agriculture Network (CalCAN), Environmental Working Group, National Audubon Society, Carbon Cycle Institute, California Trout, Californians Against Waste, and California League of Conservation Voters.

“This comes at critical time in California as the state’s farmers and ranchers experience a record-breaking drought,” said **Jeanne Merrill** with California Climate and Agriculture Network. “We thank Senator Wolk for her work to establish the Healthy Soils Program and for her ongoing leadership on agricultural solutions to climate change.”

USDA ANNOUNCES CHANGES FOR LARGEST CONSERVATION PROGRAM

U.S. Department of Agriculture - September 1, 2016 News Release

WASHINGTON – In response to customer and partner input, USDA’s Natural Resources Conservation Service (NRCS) announced today a significant update to the **Conservation Stewardship Program (CSP)**, the nation’s largest conservation program by acreage. Beginning with the new enrollment period planned later this year, the updated CSP will leverage redesigned planning and evaluation tools and an expanded array of new enhancements to provide conservation-minded producers with more options to improve conditions on working lands.

“After hearing from farmers, ranchers, and partners who wanted to see improvements to the Conservation Stewardship Program, we’re launching this update to make a successful program work even better,” said NRCS Chief **Jason Weller**. “We’ve redesigned the program to provide for greater local involvement, offer more opportunities for conservation and innovation on working lands, and make the connection between actions and outcomes more accessible to producers. Together, we can help those that grow our food and fiber take conservation efforts on working lands to the next level.”

The new tools also allow producers to see potential payment scenarios for conservation early in the process, allowing them to better evaluate their conservation options. NRCS has addressed producer and stakeholder input requesting greater flexibility to address local resource concerns. Now, NRCS will more effectively utilize input from farmers, ranchers and partners in State Technical Committees and local workgroups to inform and expand conservation strategies under the program. Producers will be better prepared to apply because they will know these local ranking priorities and targeted resource concerns in advance. **CSP is for producers who are already established conservation stewards, helping them to deliver multiple conservation benefits on working lands, including improved water and soil quality and enhanced wildlife habitat.**

NRCS will provide more information about the new program, including funding opportunities for the Fiscal Year 2017 enrollment period, later this year.

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**PLEASE SUBMIT PHOTOS,
NEWS ITEMS, AND
FEATURE ARTICLES
TO THE EDITOR FOR THE**

FALL ISSUE OF RUNOFF

BY NOVEMBER 25

RUNOFF is the official California-Nevada
Chapter SWCS newsletter.

Editor and Publisher:
Walt Bunter – wbunter@pacbell.net

RUNOFF reserves the right to edit all submissions.

HUGH HAMMOND BENNETT

Out of the long list of nature's gifts to man, none is perhaps so utterly essential to human life as soil. *Page 5.*

National action may be led and aided by government, but the soil must be conserved ultimately by those who till the land and live by its products. *Page 15.*

In this democracy, national action to conserve soil must be generated by these millions of land users. If they are active and willing participants in such a movement, it will endure; otherwise it will fail. *Page 313.*

National conservation action must spring from people on the land, and to a large extent, be advanced by them as individuals, with the help of government. *Page 314.*

Unless the United States goes ahead vigorously, persistently, and speedily to defend and conserve the soil and to make far-reaching adjustments in its complex land economy, national decadence lies ahead." *Page 337.*

Today, we are simply retracing our steps across the land in an effort to correct past mistakes in the interest of the future. *Page 337.*

(George) Washington informed his overseer in 1795 that immediate profit was not so much an objective as the bringing of worn-out and gullied fields into condition to produce grass." *Page 506.*

The above quotes are from: Hugh Hammond Bennett. *Soil Conservation*. New York: McGraw-Hill Book Company, Inc., 1939.

MISSION STATEMENT

The Chapter is a multidisciplinary scientific and educational organization dedicated to natural resource enhancement through an ethic which recognizes the interdependence of human communities and natural systems. The Chapter achieves its mission through its members using mutual cooperation and understanding to create opportunities for improving soil and water conservation in California and Nevada.