

### A MESSAGE FROM THE ACTING DIRECTOR



We are very pleased to provide this end-of-year report for Fiscal Year 2013. The West National Technology Support Center is committed to assisting the Western States and the nation in delivering conservation. This report continues the approach we have been following for a few years of providing in-depth articles by discipline area describing some of the more significant accomplishments of the year and looking ahead to what we anticipate for next year.

NRCS is often referred to as a “technical agency” one that is rooted and based in science. The National Technology Support Centers provide an important role in delivering science to our State Offices, the field and our partners. The Centers provide critical training, develop new and innovative technology and provide guidance to over 70 Conservation Innovation Grants across the country. The entire staff at the WNTSC is pleased to help deliver conservation to working lands in the West and across the nation.

Fiscal Year 2013 provided challenges for all NRCS Offices yet a significant amount of assistance, training and technology development occurred. Tracking of direct assistance efforts indicates that we experienced similar interactions and support of our customers but the modes of connections expanded to webinars and other non-traditional vehicles compared to prior years. We recorded 814 specific direct assistance projects. Of that number, 515 were what we call ‘formal’ assistance projects. These ‘formal’ projects involve more than twenty work hours, in response to a written request, and result in a written report at the end of the project.

Training continued to be a big part of our assistance this year. We supported 122 training sessions and provided

training to an estimated 2,105 students. Nearly 1,334 students received training through 95 classroom/field training courses. The remaining 771 students received training through 27 net-meetings or webinars. Detailed information on training can be found in the tables in this report. Many of the webinars can be viewed at the Science and Technology Training Library (<http://www.conservationwebinars.net/>).

Staffing changes occurred with the retirements of Stefanie Aschmann, Energy Team Leader, Meg Bishop, Environmental Compliance Specialist, Bruce Newton, Director, Stacy Mitchell, Public Affairs Specialist, Pat Shaver, Rangeland Management Specialist, Fred Theurer, Hydraulic Engineer, Pat Willey, Wetland and Drainage Engineer, Craig Ziegler, Forester. Russ Hatz has announced that he plans to retire as well near the end of the calendar year.

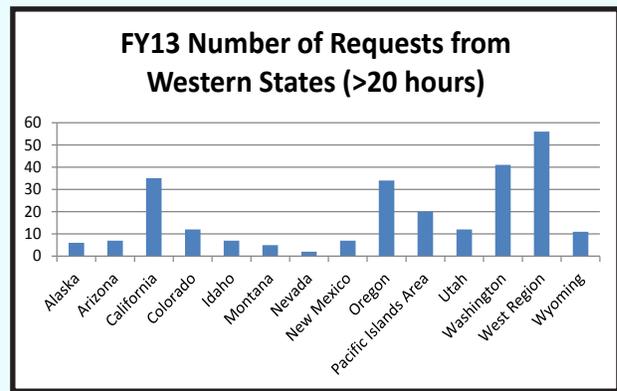
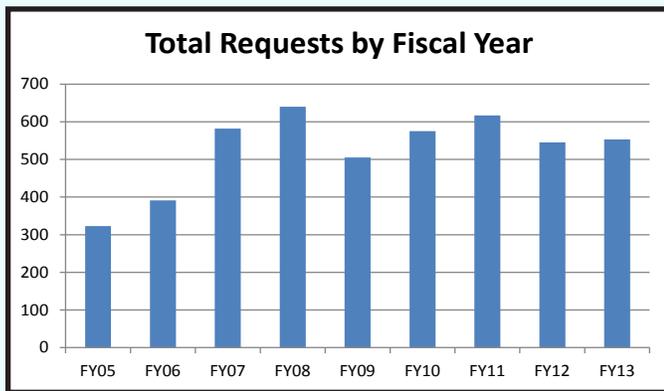
Although most of our staffing changes consisted of retirements, we were able to hire two new staff members. Karma Anderson joined the Water Quality and Quantity Team as a Water Quality Specialist and Data Steward. She will be focusing on both Edge of Field Monitoring (Conservation Activity 201 and 202) as well as the National Water Quality Initiative. Tamara Marcus joined our staff as a Pathways Student. Tamara is studying at the University of Minnesota and has an extensive agriculture background.

As always, we greatly appreciate the opportunity to provide technology assistance to you, our customers. Please don’t hesitate to contact our specialists. And please let me know how we can better serve you.

- SHAUN P. MCKINNEY

# FY13 WNTSC Assistance Analysis

FY13 Number of Requests by Region and Time Commitment			
WNTSC assistance provided to:	Number of Requests		
	Informal (<20 hrs.)	Formal (≥20 hrs.)	Total
West Region States	52	109	161
Central Region States	11	15	26
Northeast Region States	22	47	69
Southeast Region States	10	10	20
All States	8	14	22
National Headquarters	121	134	255
<b>Total</b>	<b>224</b>	<b>329</b>	<b>553</b>



Count of Requests by Western States FY05-FY12									
	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Alaska	2	12	8	3	11	10	10	11	6
Arizona	1	6	16	15	24	18	15	16	7
California	15	17	31	33	32	25	15	34	35
Colorado	5	16	19	23	23	25	11	26	12
Idaho	55	16	15	24	27	18	16	36	7
Montana	7	10	12	14	27	18	11	27	5
Nevada	5	11	16	16	26	13	12	15	2
New Mexico	3	17	15	17	23	14	13	24	7
Oregon	31	49	56	58	60	49	32	57	34
Pacific Islands Area	9	18	26	16	17	13	16	20	20
Utah	2	15	25	23	25	16	16	23	12
Washington	11	26	27	17	36	31	20	41	41
Wyoming	2	11	20	14	12	25	35	27	11
West Region	38	60	63	85	77	88	13	69	56
<b>Totals</b>	<b>136</b>	<b>284</b>	<b>349</b>	<b>358</b>	<b>420</b>	<b>364</b>	<b>235</b>	<b>426</b>	<b>255</b>

## WNTSC FY2013 ACTIVITIES

THE FOLLOWING INFORMATION IS THE RESULT OF SUMMARY REPORTS BY MEMBERS OF THE WEST NATIONAL TECHNOLOGY SUPPORT CENTER (WNTSC) IN WHICH THEY DISCUSSED THEIR KEY ACCOMPLISHMENTS IN FY12 AND WHAT THEY SEE COMING IN THE NEAR FUTURE.

THE WNTSC CORE TEAM CONSISTS OF ELEVEN SPECIALISTS WHOSE PRIMARY FUNCTION IS PROVIDING DIRECT ASSISTANCE TO THE WESTERN STATES. THREE NATIONAL TECHNOLOGY DEVELOPMENT TEAMS (AIR QUALITY AND ATMOSPHERIC CHANGE, ENERGY, AND WATER QUALITY AND QUANTITY) ARE ALSO PART OF THE WNTSC. THEIR STAFF MAY ALSO PROVIDE DIRECT ASSISTANCE TO STATES, HOWEVER, THEIR PRIMARY FUNCTION IS DEVELOPING NEW TECHNOLOGY AND TOOLS FOR THE AGENCY AS A WHOLE.

HIGHLIGHTING KEY DISCIPLINE AREAS, THE STORIES START WITH THE CENTER'S CORE TEAM. DUE TO RETIREMENTS, THE TEAM HAD VACANCIES FOR A PORTION OF THIS FISCAL YEAR. AS A RESULT, ENVIRONMENTAL COMPLIANCE, FISHERIES BIOLOGY, AND FORESTRY IS NOT ADDRESSED IN THIS YEAR'S REPORT. FOLLOWING THE ACTIVITIES OF THE CORE TEAM, YOU WILL FIND REPORTS FROM THE CENTER'S THREE TECHNOLOGY DEVELOPMENT TEAMS.

IF YOU ARE INTERESTED IN MORE DETAILS ON THE ACTIVITIES MENTIONED HERE OR OTHER EFFORTS OF THE WNTSC STAFF, FEEL FREE TO CONTACT THEM DIRECTLY. FOR MORE INFORMATION, PLEASE VISIT OUR WEBSITE AT: [HTTP://WWW.NRCS.USDA.GOV/WPS/PORTAL/NRCS/MAIN/NATIONAL/WNTSC/](http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/wntsc/)

### Agronomy

This was the year of nutrient management planning for WNTSC *Agronomist, Richard Fasching*. Even though the travel budget was dramatically reduced this year, Rick still spent more than 62% of his time assisting Western region states with technology transfer, training, and other direct assistance. A considerable amount of that time was spent training states on nutrient management, adaptive nutrient management and comprehensive nutrient management planning along with associated software like MMP (Manure Management Planner), state specific nutrient budgets worksheets, and phosphorous index's.

At the Washington State Comprehensive Nutrient Management planning course held in Olympia, both NRCS and District employees took part in a week long training session that encompassed both engineering aspects as well as agronomic aspects of a CNMP. Rick collaborated with Sally Bredeweg, WNTSC Environmental Engineer, in developing the training format that included hands on interactive activities that dealt with real life animal feeding operations across the state. Participants will develop a CNMP and submit their plans to Rick and Sally for review. Once successfully completed, certification as a CNMP planner can be earned.

Using webinar technology, Rick also presented three training sessions including: "Biosecurity for CNMP's", a joint session by Fasching and Sally Bredeweg, Environmental Engineer with 230 participants, "Using MMP" with 90 participants, and "Adaptive Nutrient

Management" with 135 participants. Follow-up training was provided in the form of net meetings, technical materials, and one on one contacts.

In May, during a week of near 100 degree days, Rick organized and delivered the NEDC Salinity Management Course for 35 participants from six states in Phoenix, AZ. Participants travelled from Montana, Texas, North Dakota, Nevada, Kansas, Oklahoma, New Mexico, and Arizona to take part in the training session. Based upon state requests, the training cadre plans to hold another session in FY 2014.

To close the fiscal year, Rick spent considerable time refining regional payment cost scenarios for QA review.



*Rick Fasching, WNTSC Agronomist, (standing left) discusses comprehensive nutrient management planning with Ernie Holt, Area Agronomist from Euphrata, WA, as other participants work on their nutrient management plans.*

*Giulio Ferruzzi, Conservation Agronomist, and Dennis Chessman (CA State agronomist) delivered Module 7 of the "Pest Management Considerations in*

### *Core Team continued*

Conservation Planning” course to 62 students at six California locations. They presented and discussed the new policy and the Integrated Pest Management standard. They modified the typical, two-day training to accommodate limited travel budgets. They delivered the material in a single day, leaving out the field visits and group sessions. The new format allowed many employees to attend without incurring travel costs. Attendees completed the class assignment upon their return home and submitted their homework later. Giulio and Denise Troxell (OR State agronomist) delivered Module 7 at two Oregon locations to 33 students.

Richard Fasching and Giulio Ferruzzi accompanied Tracy Hanger (WA State Agronomist) and Ernie Holt (Area Agronomist), to a meeting with the Direct Seed Association members. The purpose of the meeting was to view and analyze effects of planting and harrowing to determine if those operations meet the NRCS’s “whole width tillage” definition. Rick and Giulio plan to return to further analyze tine-tooth harrow operations. The criteria in the No-till Conservation Practice Standard (329) disallow whole width tillage. Rick and Giulio may need to modify RUSLE2 & WEPS based on the results of their findings.

## **Rangeland Management**

*Gene Fults, Rangeland Management Specialist*, assisted States with a variety of issues related to grazing land conservation. Gene provided help with:

- Ranch Monitoring and Sustainability workshop: Colorado, New Mexico, Oklahoma
- Range Health and Conservation Planning workshop: Washington
- Range Inventory training: Oregon
- NRI Vegetation Monitoring training: New Mexico, Montana, Wyoming, Tennessee, and Illinois
- Forage Suitability Group training: Florida and Kentucky
- Evaluate results of Conservation Innovation Grant grazing system to improve Greater sage-grouse habitat: Montana
- Lesser Prairie-Chicken Habitat monitoring - Western Association of Fish and Wildlife Agencies

Gene also helped States with issues related wildlife, wetlands, riparian areas, Threatened and Endangered species, air and water quality.

In addition, Gene provided his expertise to aid national efforts. He helped develop the GRAS modules for Conservation Delivery Streamlining Initiative, and

conducted technical reviews of Practice Payment Schedules. He contributed to the Interagency Ecological Site Description Handbook, and helped identify high elevation riparian grazing management indicator species. He assisted the National Riparian Service Team, and the Federal Geographic Data Vegetation Subcommittee. He participated in a Landscape Study for the Greater Sage-grouse conducted by BLM and Iowa State University’s Center for Survey Statistics & Methodology.



*Range and pasture conservation requires knowing details about multiple spatial scales.*

## **Economics**

During FY13, *Hal Gordon, Economist*, served as lead instructor and national coordinator for eight NEDC Economics of Conservation Planning courses. Hal also served as National coordinator for the revised NEDC Area-wide Conservation Planning course. The Areawide Planning course, available in 2014, will help field planners develop watershed level and multi-ownership conservation plans.



*Hal Gordon, WNTSC Economist, teaching the NEDC course “Economics of Conservation Planning” in Phoenix, Arizona*

Hal led the transition of the Conservation Practices Physical Effects (CPPE) matrix to reflect changes in the NRCS list of Resource Concerns. Planners use

the CPPE to help document expected environmental effects of proposed conservation systems, and for ranking financial assistance applications. Hal also developed planning and analysis tools that utilize the CPPE.

Hal supported the multi-state Regional Scenario Teams develop Conservation Practice Payment Schedules. He also developed a Tech Note on “Basic Economic Analysis Using T-Charts”, produced a number of case studies, and provided States across the country with economics support.

## Wildlife Biology

In 2013 *Marcus Miller, Wildlife Biologist*, saw continued emphasis on Working Lands for Wildlife Initiative. Marcus assisted Colorado and Utah initiate consultation with U.S. Fish and Wildlife Service, following the proposed rule to list the Gunnison’s Sage Grouse as endangered under the Endangered Species Act. Marcus also assisted Arizona State Biologist, Stu Tuttle, complete a habitat evaluation guide for the southwestern willow flycatcher. NRCS planners in the six western states where the flycatcher breeds can use the tool to evaluate flycatcher habitat. He also met with the Arizona Black-footed Ferret Working Group to discuss the potential of using Working Lands for Wildlife funds to help recover ferrets in Arizona. Marcus trained partner biologists and range conservationists attending a Sage Grouse Initiative workshop in Lakeview, Oregon and he assisted California and Nevada draft a response to the Fish and Wildlife Service proposed rule for the bi-state sage grouse population.

Marcus also spent considerable time on ecological site descriptions. Marcus worked with WNTSC Forster, Craig Ziegler, to refine the metrics used to characterize wildlife habitat on forested sites. Marcus also helped Tom Moore, California State Biologist and a team of biologists from across the country, to write the wildlife habitat interpretations portion of the Ecological Site Description Handbook. Working with Oregon, Marcus developed habitat interpretations for two ecological sites in eastern Oregon where sage grouse is a species of concern. Biologists in other States can use these as examples and templates to develop other wildlife habitat interpretations in ecological site descriptions. Marcus continues to work with a group of riparian and ecological site experts to develop techniques for riparian ecological site inventory, and to unify the concepts for riparian ecological site descriptions.



*Roosting Sandhill Cranes,  
Rio Grande Valley, New Mexico*



*Working Lands for Wildlife,  
Lesser Prairie Chicken*

## Irrigation Engineering

When a new chapter for the National Engineering Handbook is released, it often goes unnoticed. *Peter Robinson, Water Management Engineer*, wanted to avoid this when the Surface Irrigation chapter of the NEH (NEH Part 623 Chapter 4) was completed. Peter organized a release party (actually, it was a webinar), and invited NRCS irrigation specialists to take a look at what is in the new chapter. He was able to highlight the new information in the chapter, and give suggestions for how NRCS employees at may want to use it. The recorded webinar can be viewed at the Science and Technology Training Library’s Conservation Webinar portal.

As usual, training was an important aspect of Peter’s work in 2013. The center pivot class and pump class continue to be popular requests from the states. Peter also worked with Russ Hatz to deliver a two day class of writing practice standards in California.

## Civil Engineering

Forensic engineering of a diversion structure in Wyoming State was cited by *Kip Yasumiishi, Civil Engineer*, as his primary accomplishment in FY13. Yasumiishi was assigned chairmanship for an investigation team that investigated the engineering deficiency and developed the subsequent engineering report. The failure of the diversion, which occurred in May 2011, was due to long duration flood flows and potential ice jams in the river. The investigation was time intensive and sensitive to the transparency needed in dealing with the project sponsor, State and Federal agencies.

Yasumiishi continues his involvement with State sponsored and local university workshops on river restoration, surveying, and soil mechanics.



Compromised project features

Aerial view of diversion structure post failure.



## Environmental Engineering

Natural resource challenges related to waste management and water quality are often complex, and their solutions frequently require networking between technical specialists. Because the WNTSC hosts experts of many stripes, *Sally Bredeweg, Environmental Engineer* (wearing red vest in picture below), is able to

use their diverse skills and knowledge along with her own experience to tackle multifaceted problems. The NRCS State Offices may not have the luxury of having a dedicated Environmental Engineer on staff, but thanks to Sally and her cohorts at the WNTSC, States can get answers to their questions and find solutions to problems that require a multidisciplinary approach. Sally, a relative newcomer to the WNTSC, has learned to leverage the skills of her co-workers to help her meet the demands of her challenging job. In 2013, Sally worked closely with Richard Fasching, Agronomist and nutrient management specialist, to develop tools and train staff in Comprehensive Nutrient Management Planning. She consulted with Gene Fults, Range Management specialist, on issues related to manure management in livestock winter-feeding operations. Hal Gordon, Economist, provided Sally with guidance when the National Office tasked her with developing payment schedules for the Environmental Engineering Conservation Practice Standards, and Sally relied on Marcus Miller, Wildlife Biologist, for landscape design questions. When Sally designs waste management systems she turns to Peter Robinson, Irrigation specialist, and Kip Pheil, Energy specialist for help in designing effective and efficient pumping systems.



West National Technology Support Center staff (from right) Steve Campbell, Barry Southerland, Peter Robinson, Rick Fasching, Greg Johnson, Evelyn Johnson, Kip Yasumiishi, Shaun McKinney, Betty Shatto, Clare Prestwich, Sally Bredeweg, Giulio Ferruzzi, Russ Hatz, Marcus Miller and Hal Gordon.

While Sally's primary responsibility at the WNTSC is to provide National and Regional Environmental Engineering technical support, she has also facilitated networking opportunities through the Environmental Engineers consortium, helped develop engineering tools, assessed planning and design processes, and provided training on Environmental Engineering and biosecurity. With the support of her co-workers on the WNTSC Core Team, Sally is always ready, willing and able to provide a wide range of support and technical assistance to NRCS State Offices in the West Region.

## Plant Materials

*Jim Briggs, Plant Materials Specialist*, worked with plant materials program staff throughout the region. In addition to support provided by telephone and e-mail to all PMCs he provided on-site technical support in 2013 to Plant Materials program staff in California and Oregon. Jim coordinated the development and presentation of a webinar intended to update Utah Field Office staff of current plant materials activities and products at the request of the Utah State Office. The PMCs making the presentations were Arizona, New Mexico, Nevada, Idaho, and Colorado.

The Plant Materials Centers in Arizona, California, New Mexico, and Texas are comparing alkali sacaton releases to determine relative performance in different environments. Jim completed the data analysis and developed a final report in 2013. The varieties used in this trial showed themselves to be well adapted to a wide range of environments. Based on the results from this study it appears all three varieties, from widely varying environments, perform equally well at all locations once established as long as moisture requirements are met. Under non-irrigated conditions in the hot desert areas, where early spring moisture from winter rains is available, Vegas Germplasm would be the better choice for use by conservationists. In areas where summer rains predominate and can provide 11-15 inches of precipitation “Salado” would be the best choice. “Saltalk” would work best east of the Rocky Mountains where 15-30 inches of precipitation is available during the growing period.



*Vegas Germplasm at the  
Arizona Plant Materials Center*

Jim continues coordinating the national soil health study at the California, Oregon, Washington, and 4 other PMCs. This trial is designed to evaluate and document the effect of mixed species cover crops on soil health. The NRCS Soil Survey Research Laboratory (Lincoln

Nebraska) and Dr. Richard Haney (ARS-Temple TX) are collaborating. Independent of the national cover crop study plant materials staff in Arizona, Montana, and New Mexico has similar studies underway. In September a national webinar was provided to share some initial results with technical staff in states.

## Soils

In FY 2013 *Steve Campbell, WNTSC Soil Scientist*, assisted Alaska NRCS develop a permafrost sensitivity soil interpretation. This new interpretation will rate a soil's sensitivity to permafrost thawing caused by climate change or vegetation removal. He assisted Oregon NRCS develop a soil interpretation designed to predict the vulnerability of rangeland soils to Western juniper (*Juniperus occidentalis*) encroachment, which can increase erosion; reduce stream flows; reduce forage production; and alter plant community composition and structure. Oregon hopes to use of this soil interpretation to help in target EQIP funds for juniper removal. Steve also helped Arizona and New Mexico test and evaluate a nitrate leaching potential soil interpretation.

Campbell assisted Washington NRCS develop a forest inventory GIS database for use in developing forest ecological sites descriptions in western Washington. In addition, he created custom soil reports for the Pacific Islands Area (PIA) that display important physical and chemical properties of tropical soils. He also assisted the PIA develop a list of soil map units with significant limitations for fencing construction. PIA will use this information to determine EQIP cost share rates for fencing projects.

Steve served as an instructor for the “Application of ArcGIS and Soil Data Viewer in Technical Soil Services” and “The Science of Soil Interpretations” NEDC training courses. He also assisted California design and deliver “Soils for Conservation Planners” training. The class taught planners how to use the Soil Quality Field Test Kit to evaluate soil properties, such as compaction, water infiltration, aggregate stability, pH, and salinity.



*Participants measuring soil aggregate stability and infiltration rate at a “Soils for Conservation Planners” training session in Indio, California.*

Over the 2013 fiscal year, with support from the WNTSC and funds leveraged from non-NRCS sources, Mace and his colleagues at Xerces provided the NRCS and NRCS partners – farmers, conservation districts, conservation organizations, state and federal agencies, university cooperative extension, and others – with dozens of presentations, webinars, and pollinator conservation planning short courses across the country. Over 500 NRCS staff received training in FY2013, along with more than 7,000 partners. A highlight of this outreach was our full day short course, workshops, and office hours held at the Ecological Farming Conference in Pacific Grove, CA. Hundreds of farmers, conservation district, and NRCS staff attended these trainings.

## Pollinators

2013 has been a strong year for pollinator conservation at NRCS and the WNTSC.

*Mace Vaughan, Director of the Xerces Society Pollinator Conservation Program*, continues to provide leadership for advancing the pollinator, wildlife, and plant conservation goals of NRCS at the WNTSC. The team of specialists Mace manages is addressing technical questions from the field and from the states, working on pollinator habitat demonstration projects and field trials with Plant Materials Centers and farmers, and helping raise awareness among farmers about how NRCS can support pollinator conservation efforts.

Mace worked closely with the leadership of the Xerces Society and all three NRCS National Technology Support Centers to develop the new cooperative agreement signed in September of 2013. This new 2-year agreement will maintain the existing pollinator conservation staff at the East and West NTSC, and also add a new pollinator conservation specialist in the Central Region.

Mace and his colleagues also took time in early 2013 to finish production of a three-volume summary of the technical products and trainings Xerces has developed for NRCS over the past seven years. It is an impressive collection of state and regional plant lists, technical notes, trainings, and other pollinator conservation support for NRCS national, regional, state and field offices!



*Portfolio of seven years of collaborative work between the Xerces Society and NRCS. Photo by Mace Vaughan, Xerces Society.*

Another highlight of this year’s trainings was an hour-long webinar on pollinator pesticide risk reduction Mace presented with Giulio Ferruzzi, Conservation Agronomist at the WNTSC. The August webinar introduced NRCS to a framework for how NRCS can use the conservation planning process to help landowners protect bees and other pollinators from pesticide exposure. The framework is based on a national technical note written by Mace, Giulio, the WIN-PST team, and David Biddinger of Penn State University. It outlines methods for determining the potential risks of pest management practices and then encourages collaboration with pest management specialists to develop strategies to reduce risk. This technical note is currently undergoing an editorial and final formatting review and should be released early in FY2014.

Early in FY2013, with funding from a national CIG grant, Xerces staff completed drafts of Conservation Cover and Hedgerow Installation Guides that provide

*Core Team continued*

details on creating pollinator habitat in several regions of the country. The guides represent the latest findings on how to most successfully establish wildflower-rich habitat using NRCS practices. With funding from the WNTSC, we are working with state offices across the country to refine 14 of these technical guides so they best meet the needs and current job sheets used by each state office.

Demonstrating the efficacy of these practices has been a priority across the country. In the west, for example, we leveraged funding from the Oregon Department of Agriculture to create additional demonstration sites in Oregon. These were planted in the fall of 2012, after a full growing season of aggressive weed abatement. This summer, they looked great (see photos)!



*An abundance of Douglas meadowfoam and seablush is blooming in a demonstration pollinator habitat planting on Sturm Berry Farms in Oregon. This field border habitat project is the result of a collaboration of the Xerces Society, the WNTSC, and the Oregon Department of Agriculture. Photo by Eric Mader, Xerces Society.*

## Organic Conservation

Building on the success of Sarah Brown, *Joint Organic Conservation Specialist, Oregon Tilth* secured grant funding to hire a second *Organic Conservation Specialist, Ben Bowell*. Thanks to Sarah and Ben, activities at the WNTSC to support the organic agriculture conservation needs of NRCS and partners increased significantly in 2013.

In response to the release of USDA's guidance on organic agriculture, NRCS initiated a number of projects designed to improve collaboration with other USDA agencies, and provide clearer direction on reporting responsibilities and representation with respect to

organic agriculture.

In collaboration with project partners (Northwest Coalition for Alternatives to Pesticides, NCAT-ATTRA, Extension, and NRCS), Sarah and Ben started work on a multi-state Western SARE project by drafting the following documents:

- Conservation Buffers in Organic Systems, Western State Implementation Guide
- Nutrient Management in Organic Systems, Western State Implementation Guide
- Cover Crops in Organic Systems, Western State Implementation Guide
- Resources for Conservation Planning on Organic and Transitioning-to-Organic Operations
- Common NRCS Practices Related to Pest Management on Organic Farms

Using these documents as a guide, NRCS Partners conducted five training sessions in Washington and California for agricultural professionals, with additional sessions planned for Wyoming, Oregon, and Nevada in 2014. Upon request, Sarah and Ben will update these documents with State specific information and make them available for other States.

Because Iowa's SARE Professional Development Program chose to prioritize organic training for Iowa NRCS staff, Sarah and Ben will lead five trainings sessions across Iowa. They will provide three introductory courses, and two sessions titled, 'Less Steal in the Field', which will focus on alternative tillage techniques in organic systems and include an intensive RUSLE2 session led by Giulio Ferruzzi, WNTSC Agronomist.

Sarah is co-leading a National Team to develop an Organic Agricultural Guidebook, a one-stop shop for all things organic at NRCS. The guidebook, designed for planners, will provide an overview of planning considerations related to organic farming, and technical information to aid in the development of conservation practices. Drafts are expected to be available in 2014.

Another topic with great potential to increase NRCS support conservation on organic farms is the streamlining of NRCS and USDA National Organic Program (NOP) plan requirements. Currently, NOP regulations require producers to develop an Organic System Plan, which must include information outlining a producer's biodiversity and natural resource management practices. While NRCS conservation plans contain much of the same information, there is

no formal agreement that allows producers to submit a NRCS conservation plan to meet the NOP requirement. Sarah and Ben meet regularly with NRCS, external partners, organic certifiers, and those who manage the NOP to investigate opportunities to simplify these requirements.

Sarah and Ben shared information with producers and partners at multiple conferences and meetings: Organicology, OSU Small Farm's Conference, eOrganic's Visioning Session, and regular National Sustainable Agriculture Coalition meetings. They also produced a very popular webinar series in 2013, hosting five external speakers, with over one thousand attendees calling in. While development of the 2014 series is currently underway, Sarah and Ben invite you to submit suggestions for topics.

Soon, Sarah and Ben will send you a request to fill out the annual organic assistance needs survey. They look forward to learning of the priorities of your State and how they might best facilitate the creation and dissemination of organic technical assistance tailored to your needs.



*NRCS staff visit organic date and raisin vineyards during a Western SARE supported training in southern California.*

## **A Note from Russ Hatz, National Technology Specialist**

Those of us eligible to retire often cite the “3 bad days” rule, where we declare that we will continue to work until we have three bad days in a row. Well, it finally happened to me so I plan to retire January 3rd. Rest assured, my three bad days did not come at the hand of anyone I work with on a day-to-day basis. I love my job and those I work with. I will miss working on the Conservation Delivery Streamlining project. I eagerly anticipated playing a part in the rollout of the new planning tools. I will miss helping planners decipher policy and maneuver through rules and regulations (some of which I helped obfuscate) to get conservation on the ground. I will miss the passionate discussions between students attending the Conservation Practice Writing Workshops. Mostly, I will miss the opportunities to ride in a car, talk in the hall, or visit on the phone with you and share stories about kids, concerns for families, and hopes for the future.

As a forester, soil conservationist, archaeologist, manager and supervisor I looked forward to going to work every morning of my 38+ years of Federal service. I thoroughly enjoyed my work and my co-workers. I met and interacted with many incredible people and saw some amazing sights. I consider myself very blessed.

When I started with SCS in 1980, I worked with a technician named Dutch. Dutch taught me a lot, but he constantly complained about how the agency had changed and how work just wasn't as much fun as it once was. I admired Dutch, but as a new SCS employee, excited about the possibilities that lay ahead, I resented his negative attitude and swore if I ever reached that level of pessimism, I would keep my mouth shut, walk out the door and find something else to do. So, with that I say goodbye and God bless. Thank you all. I have had a blast.



# NATIONAL TECHNOLOGY DEVELOPMENT TEAM ACTIVITIES

## AIR QUALITY AND ATMOSPHERIC CHANGE

### On-Line Training for Air Quality and Animal Agriculture Almost Here

The National Air Quality and Atmospheric Change Technology Development Team developed an initial set of on-line training courses for NRCS staff in 2009. As a follow-up to that work, the team has recently been working on the development of a new on-line training course focused on the specific air quality issues related to livestock and poultry operations. *Greg Zwicke, Air Quality Engineer*, has invested a considerable portion of his time in FY13 in leading the development of this course, titled "Air Quality and Animal Agriculture."

The course has three modules, with Module 1 focused on identifying the primary reasons why animal operations are scrutinized in regard to air emissions. Module 2 is intended to help identify the primary air emissions produced from animal operations and to describe how those emissions are generated, emitted, and transported. Finally, Module 3 will help identify NRCS options for mitigating air emissions from animal operations.

As with most training courses that are developed from scratch, a significant amount of time and effort went into building the slides, narration, graphics, etc. that are needed to develop the course. Greg worked with an informal group of internal and external animal air quality experts to guide the focus of the course, as well as to conduct the initial review of the draft storyboard, which has recently been finalized. *Evelyn Johnson, Administrative Assistant* at the WNTSC, was instrumental in helping to compile a large amount of data and convert them into graphics for the course.

Now that the storyboard for the course has been finalized, Greg will continue to work with the NRCS National Employee Development Center (NEDC) and the NEDC contractor (Adayana) to build the on-line structure from the storyboard, create additional graphics and animations, and narrate the course script. Significant progress has already been made this month by the contractor, so it is expected that the course will be on-line in AgLearn for your learning enjoyment in late 2013 or early 2014.



## ENERGY

The Energy Tech Team devoted FY13 to four primary areas:

- training and outreach
- direct support for State staff
- response to varied NHQ requests, and
- efforts to maintain and expand analytical tools

A sizable portion of the team's workload laid building blocks; FY14 promises to provide a good test of this foundation.

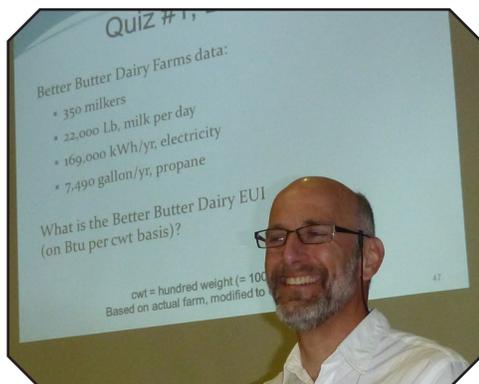
FY13 was notably marked by the retirement of Stefanie Aschmann. As the founding team leader, her departure cut the team by half, and institutional memory by a much larger fraction. (In her honor, the lights have been off in her former office with about a 45% reduction in electricity use for lighting.)

*Kip Pheil, Energy Specialist*, spends much of his time fielding On-Farm Energy Initiative questions related to contracting energy Conservation Activity Plans (CAP), evaluating the resulting Ag Energy Management Plan, and implementing practices to achieve the desired results. While Farmstead Energy Improvement (374) continues to be the primary practice used by planners, the introduction of Building Envelope Improvement (672) and Lighting System Improvement (670) provide planners additional flexibility to address resource concerns.

Kip assists State and national groups with efforts to identify, recruit, and evaluate Technical Service Providers. This is a high priority activity, as many states need to expand TSP coverage. The NRCS Conservation Engineering Division made a significant move to address these concerns by bringing Dan Meyer, former NRCS National Ag Engineer, out of retirement to address TSP and Ag Energy Management Plan issues.

The Energy Team devoted substantial effort to prepare materials for a comprehensive training program focused on the skills required to perform energy related assessments, and to plan and evaluate energy related conservation practices. More details on this effort will be available soon.

Students at a half-day workshop team up to solve a quiz.



Kip Pheil introduces a quiz during a half-day workshop in North Carolina.

Photo Credits: Kim Kroeger, NRCS

## WATER QUALITY AND QUANTITY

Land owners across the country need to address water quality and quantity natural resource concerns on a daily basis. To help the NRCS field staff to support producers and the working lands they steward, the Water Quality and Quantity Team (WQQT) focuses their work in four major areas:

- Water Quality and Quantity Technology Development
- Water Quality and Quantity Training
- Direct Assistance to NRCS State Offices
- Water Quality and Quantity Leadership

The WQQT continued management of over 50 Water Quality and Quantity applications used by state and field office staff nationwide including Manure Management Planner (MMP), Agricultural Waste Management (AWM), Windows Pesticide Screening Tool (WIN-PST), TR20 and TR55, and the Water Quality Index (WQI).

Transitioning these programs and the conservation planning steps they facilitate into the Conservation Desktop Streamlining Initiative (CDSI) was one of the major Technology Development challenges in FY13. Working with the CDSI staff, the WQQT laid plans to transition pest and nutrient management to more streamlined planning processes, using technology and corporate information. Work continues but the Team is confident they can deliver comprehensive conservation more effectively through CDSI.

The WQQT team led and assisted with over 50 national and regional training sessions for NRCS field staff, Technical Service Providers (TSPs), crop consultants and other conservation partners. Nutrient and pest management training requires very close collaboration with the crop consultant community, so most of that training was done in collaboration with Extension and University specialists. WQQT team members were active on National Employee Development Center, professional society and state office requested training cadres, but with limited budgets webinars and video teleconferences were often used to deliver training.

Water Quality and Quantity Team members participated in many direct assistance projects across the country in FY13. Stream restoration and natural channel design continue to be in high demand as states tackle complex riparian and aquatic system conservation. The WQQT team also engaged in dam inspection and design analysis for agricultural impoundments.

The WQQT provides Water Quality and Quantity leadership in the national Conservation Effects Assessment Project (CEAP) and is working with the CEAP Modeling Team to link CEAP's broad scale measurement of the benefits of conservation practices with site-specific planning considerations. The WQQT is also engaged in many national Initiatives including National Water Quality, Mississippi River Basin, as well as the Chesapeake Bay, Great Lakes, and Gulf Coast Initiatives. Water quality and quantity plays a pivotal role in almost all conservation planning and program implementation so the WQQT works closely with other USDA agencies, universities, EPA, and external conservation organizations to bring the best water quality and quantity technologies to NRCS field staff and all of their customers.

Sampling for macroinvertebrates and assessing stream geomorphology health

