



### *A Message from the Director*

This is our Quarterly Report for the third quarter of FY12. I hope that you find something of interest among these short articles. The range of activities and projects going on at your Tech Center is very broad and we can only provide a small sampling in these reports. I would urge all technical specialists to make use of the many ways you can keep up to date on technology developments. The West Region Discipline Consortia serve a very important role in sharing information. The S&T Training Library is a gold mine of recent webinar recordings and other training materials. Finally, I would urge you keep in touch with the WNTSC specialist for your discipline.

This past quarter has been dominated by the effort to develop guidance for the Regional Payment Schedule Teams and the CDSI software development efforts. Several of our specialists are on detail to the CDSI Team and many others are actively engaged in CDSI projects. We are also leading the development of a new Water Quality Initiative including developing a new index to estimate the water quality benefits of the Initiative.

As always, we appreciate the opportunity to serve you, our customers. Please don't hesitate to contact our specialists and please let me know how we can better serve you.

- Bruce Newton



### CORE TEAM HIGHLIGHTS:

#### **Selenium Leaching Potential Soil Interpretation**

*Steve Campbell, Soil Scientist*, is assisting NRCS Colorado in the development of a selenium leaching potential soil interpretation in the National Soil Information System (NASIS). This interpretation is designed to rate soil map unit components for their potential to leach selenium below the root zone when irrigation water is applied.

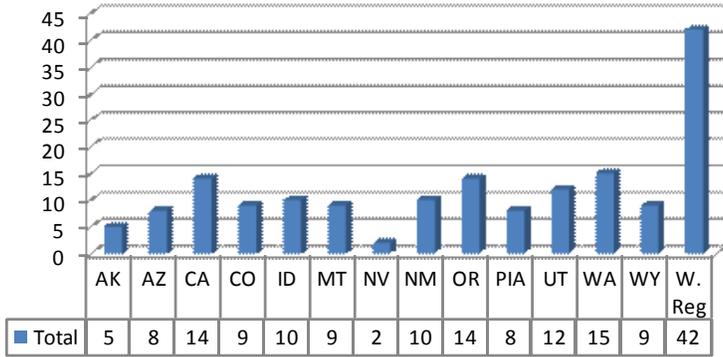
Selenium in surface waters is a water quality concern in the Gunnison River Basin in western Colorado (USGS Water Resources Investigations Report 02-4151). Selenium concentrations in some fish- and bird-tissue samples collected in the 1990's were at levels of concern.

The soil interpretation uses the following criteria in assigning selenium leaching potential ratings:

- Soil parent material - soils formed in material weathered from Cretaceous marine sedimentary bedrock have been identified as significant sources of selenium.
- Climatic factors - selenium water quality concerns related to irrigation water have only been observed in arid or semiarid environments. The interpretation uses mean annual precipitation and

# An Analysis of WNTSC Assistance First, Second and Third Quarters FY 2012

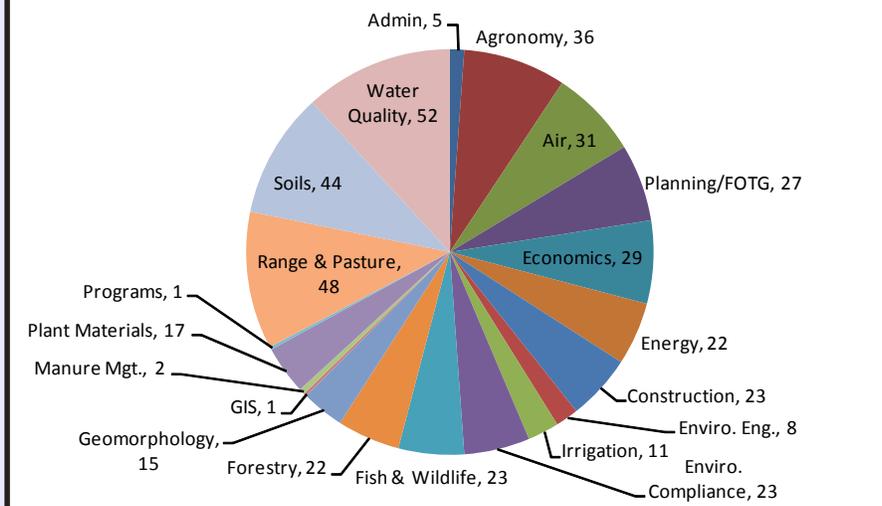
**Number of Requests from Western States  
Requiring >20 Hours 1st - 3rd Quarters FY12**



WNTSC assistance provided to:	All Requests	>20 Hours
West Region States *	248	144
Central Region States	18	8
East Region States	31	29
All States (nationwide efforts)	80	57
NHQ/NEDC	63	18
<b>Total</b>	<b>440</b>	<b>256</b>

\* includes multi-state and region-wide requests

**Number of Requests Received by Subject  
1st - 3rd Quarters FY12**

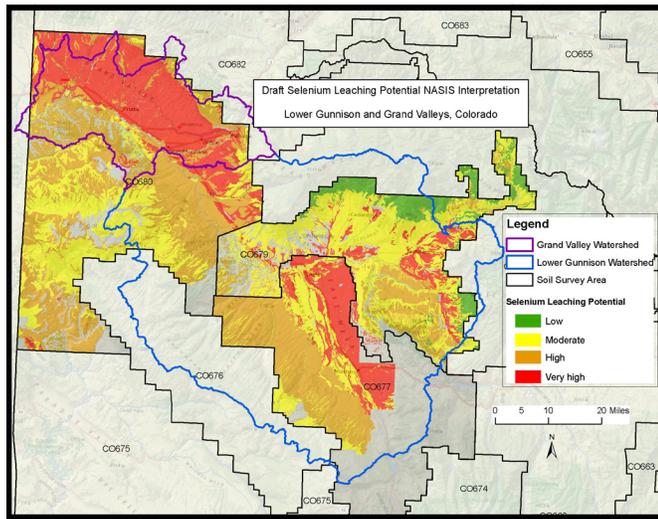


For more information on Assistance Requests, please contact Russ Hatz, WNTSC National Technical Specialist at [russ.hatz@por.usda.gov](mailto:russ.hatz@por.usda.gov) or 503.273.2428.

mean annual potential evapotranspiration to assign an “evaporation index” (USGS Fact Sheet FS-038-97).

- Soil pH - alkaline pH favors the formation of water soluble forms of selenium that are readily leached. Acidic soils tend to form metal-selenite compounds that have very low solubility.
- Depth to bedrock - soils that are shallow to bedrock have a greater risk of selenium leaching than deeper soils.

The interpretation is currently being tested on soil map unit components in the Gunnison and Grand Valleys in western Colorado.



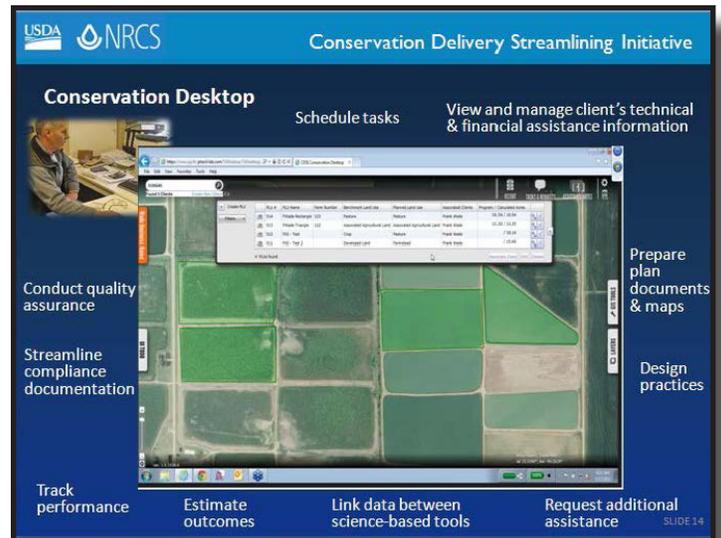
Map displaying draft selenium leaching potential soil interpretation ratings in the Lower Gunnison and Grand Valley in Western Colorado

## Conservation Delivery Streamlining Initiative (CDSI) “Foundation Training”

Between February 16 and April 19, *Russ Hatz*, *National Technical Specialist* conducted thirteen Conservation Delivery Streamlining Initiative (CDSI) “Foundation Training” sessions. Approximately 300 State and Area Office technical specialists responsible for developing materials used by conservation planners attended the training sessions. In each 5-6 hour session, Russ covered the coming changes to the Resource Concerns, planning criteria, and land-use definitions. He also discussed how these changes impact the development and use of Conservation Practice Standards, specification worksheets, technical notes, and the Conservation Practices Physical Effects matrix. Russ demonstrated how the new “Conservation Desktop” plan-

ning tool guides the user through the planning process, and described how the underlying design “streamlines” the planning process. Russ cautioned the participants not to expect a simplified planning process using the Conservation Desktop. He noted that while the Conservation Desktop eliminates redundant tasks, reduces planning criteria ambiguity, automates data management, and facilitates information sharing, one of the overriding goals of CDSI is to give planners more time in the field, to collect better-quality data, and to conduct analysis that is more thorough. Once fully implemented, NRCS leadership expects the CDSI effort will enable planners to produce more comprehensive and better-documented conservation plans that result in the implementation of practices directed at treating identified resource concerns. The Conservation Desktop and related CDSI software will enforce policy that requires the development of a complete conservation plan prior to the signing of NRCS financial assistance contracts that assist clients implement conservation practices.

Materials used in the Foundation Training are available to designated State CDSI Points of Contact to train the rest of each State’s employees. A CDSI Readiness team is available to assist States in training, as is Russ ([russ.hatz@por.usda.gov](mailto:russ.hatz@por.usda.gov)).



## Organic Agriculture Conservation

*Sarah Brown, Organic Conservation Specialist*, has spent the last quarter supporting States in the implementation of this year's Organic Initiative. She's worked with States to develop State-specific webinars, provided in person training, and worked with external partners to increase outreach efforts across the country. This summer she'll be working with the EQIP team to review the sign-up and suggest changes for next year. Please contact her with any feedback or input you would like incorporated.



*Quite possibly the only locally grown banana and papaya were discovered at Onsen Farm during an organic training in Idaho.*

An on-going issue for most States has been a lack of TSP's with organic expertise. The Conservation Activity Plan Supporting Transition to Organic (138) has garnered a lot of interest but most states have not had the TSPs needed to contract these CAPs. Sarah has continued to work on this issue from a number of angles. In collaboration with S&T leads at headquarters, the CAP 138 criteria are being reviewed and updated to ensure we're offering the most valuable product to our clients while providing the necessary support to field offices. Sarah is working with a number of external partners to assess TSP training needs and develop plans for increasing the pool of available TSPs. Recently a teleconference was held with all the organically-trained TSP nationwide. This provided valuable insight into what the issues are and what is needed to make this CAP more successful. Lastly, payments schedules for the CAP 138 will continue to have a scenario that accounts for TSP travel costs. This was implemented last year in recognition of the lack of TSPs and the distance they often have to travel to provide services.

The Organic Production Webinar Series continues. Our June webinar 'Food Safety and Conservation' was postponed due to the expected roll-out of proposed

rules from FDA. Stay tuned for a rescheduled date. On August 14th we'll have Mace Vaughan, Pollinator Program Director, Xerces Society & NRCS, present 'Establishing & Maintaining Habitat for Pollinators and Beneficial Insects on Organic Farms'.

## Environmental Engineering and 2013 National Scenarios for Program Payments

*Sally Bredeweg, Environmental Engineer*, has been on the job for over six months with the WNTSC Core Team. During the third quarter of FY12, Sally worked with staff across the country developing the 2013 national scenarios for program payments related to environmental engineering which was, and continues to be, a challenging effort. The goal was to ensure an adequate variety of scenarios along with a list of cost components to support the practice as applied nationally. In the process of working across several time zones, Sally has appreciated the time saving convenience of using the 'Office Communicator' application to contact her colleagues to receive answers to quick questions, view contact information and share information using Live Meeting.

If you have questions or need assistance related to animal waste systems and environmental engineering, please call Sally at (503) 273-2423, email at Sally.Bredeweg@por.usda.gov, or send her an instant message on Communicator.

## SHMS - A New Direction

Chief Dave White recently announced a new national planning emphasis, the Soil Health Management System (SHMS) approach. Soil health has been a significant concern dating back to the Dust Bowl days, the era that initiated the founding of our agency. What is new is the definition and understanding of healthy soil, and a renewed emphasis on using it to mold the way planners and producers work together to protect our nation's natural resources and continue to work toward agricultural sustainability. NRCS is recognized as the world's premier soil and conservation agency so who else to better implement this new emphasis?

*Rick Fasching, Conservationist Agronomist*, recently returned from assisting the New Mexico State Office with their first SHMS train-the-trainer session. Prior to

*Core Team continued*

this training, New Mexico held more than 60 producer workshops throughout the state. New Mexico is one of the leaders in implementing the new SHMS planning emphasis thanks to the support from former state conservationist Dennis Alexander, State Agronomist Rudy Garcia, and Soil Scientist Clarence Chavez, among others.

Future training sessions will emphasize in-field practical approaches to decision making based on the function of soil resulting in the implementation of proper soil health management systems to resolve resource management issues.

### **Innovative Training on a Shoestring**

*Marcus Miller, Wildlife Biologist, and Dr. Pat Shaver, Rangeland Management Specialist, completed a six month training program for 24 newly hired partner biologists and range cons.*

In March of 2010 the Natural Resources Conservation Service began the Sage Grouse Initiative (SGI). The SGI was designed to provide an integrated approach to conserving sage grouse and sustaining working ranches in the sagebrush biome. In order to help meet the staffing needs for the initiative, NRCS recently combined resources with 35 conservation partners. Using the combined resources, partners were able to hire 24 additional biologists and range conservationists and located them in key SGI areas to meet technical assistance needs.

In January Tim Griffiths, Sage Grouse Initiative Coordinator, and Randy Gray of the Inter Mountain West Joint Venture requested the assistance of the West NTSC in developing and delivering a training plan for the new SGI hires. Pat Shaver and Marcus Miller designed a curriculum that maximized the use of distance learning methods for the SGI team due to budget and time constraints. The curriculum started with ARS videos on techniques for conducting inventories and monitoring rangeland resources. Students also studied Indicators of Rangeland Health on the Bureau of Land Management's training web site. The training plan included interactive webinars concerning Water for Wildlife, The Use of Ecological Site Descriptions as Decision Support for Improving Sage Grouse Habitat, and Grazing Systems for Wildlife Habitat Improvement. Finally, in June, 22 of the SGI hires and 6 Wyoming NRCS and

District employees were brought together in Pinedale, Wyoming, for face to face training and field experience. Students were led in exercises to gather data for planning prescribed grazing and for identifying habitat needs for sage grouse by Pat and Marcus. Students interpreted the data and developed conservation alternatives in the classroom.

Feedback from the States indicated that this hybrid training approach of a highly structured curriculum of self-study, interactive webinars, and a field/classroom training session was very successful. Contact Marcus or Pat for more information.

### **AIR QUALITY AND ATMOSPHERIC CHANGE TEAM:**

#### **NRCS Climate Change Vulnerability Assessment and Adaptation Plan Delivered**

Greg Johnson, Leader of the Air Quality and Atmospheric Change Technology Development Team, is currently also serving as the Acting NRCS National Leader for Climate Change. One of his primary responsibilities in this role was to conduct a climate change vulnerability assessment for the agency, and develop a plan for potential adaptation strategies. Each agency in USDA and throughout government was directed to complete their initial work on adaptation by June, 2012, per directives from the President's Council on Environmental Quality (CEQ). The USDA Climate Change Program Office (CCPO) served as the coordinating body for all agency work on this project, and developed a USDA Climate Change Adaptation Plan, as well, that was largely a compilation of the multiple agency plans. To accomplish the NRCS task, Greg formed the NRCS Climate Change Coordination (CCC) Team. This team is composed of more than 20 individuals for nearly all sectors of the agency, including three state representatives, and specialists from Science and Technology, Soil Science and Resource Assessment, Strategic Planning and Accountability, and Programs. The CCC Team then formed 8 sub-teams that assessed how climate change over the next 40 years may impact agriculture and natural resources in specific resource arenas: soils, water quality, water quantity, air quality, plants (including crops), wildlife and fisheries, livestock and poultry, and energy. Sub-team reports were then compiled, synthesized and prioritized to develop the comprehensive (44 pp) assess-

ment and adaptation plan. From this larger document a concise 7 page vulnerability assessment and adaptation plan was constructed. This 7 pp. plan was officially endorsed by Chief White and the Deputy Secretary for NRE on May 23, and is the agency document that was forwarded to CEQ and included in the USDA Adaptation Plan in June. Later in the summer it is anticipated that the CCC Team will begin working on developing very specific adaptation goals and tasks. Nearly every sector of NRCS operations will potentially be affected by these goals. First and foremost, it will be important for each sector to thoroughly understand how and why climate is already integral to conservation activities (including engineering design, ecosystem processes, production agriculture, etc.). Following this, and using likely climate scenarios, specific resource impacts and plans for adaptation can be made.

For more information on this effort please contact Greg Johnson, AQAC Team Leader at [greg.johnson@por.usda.gov](mailto:greg.johnson@por.usda.gov); (503) 273-2424.

#### **WATER QUALITY AND QUANTITY TEAM:**

The Water Quality and Quantity Team has been particularly busy in the third quarter of FY2012. Highlights include participating in the NEDC Water Quality Resource Assessment Course held in Manhattan, Kansas. Participants were instructed in Geomorphology, Aquatic Conservation Planning, Stream and Riparian Assessment as well as identification of aquatic macro-invertebrates.

Other activities include significant development work integrating both the pest management and nutrient management planning procedures into the Conservation Desktop Streamlining Initiative (CDSI). Three of our staff have been detailed to the CDSI effort for more than 50% of their time. Further CDSI activities include the advancement and integration of the Hydrology Tools within the Engineering Field Tools module.

The Water Quality and Quantity Team has provided leadership in the development of the payment schedule project, investing significant time and effort. Finally some of the most important accomplishments this quarter have been working with the states on a series of requests in water quality.



*NEDC Water Quality Resource Assessment Course held in Manhattan, Kansas in June.*

#### **ENERGY TEAM:**

During the third quarter of FY-12 the Energy Technology Development Team focused primarily on training, tools, practice standards, and CDSI integration.

**Training:** The Energy Team has undertaken a major effort to gain agency support for a national energy training initiative to equip a group of State specialists to obtain approval authority for AgEMP - Headquarters (122 and 124) and Farmstead Energy Improvement (374), and to help train others in their respective States to help implement these practices. In addition to this effort, the team has been developing a training matrix to help field office personnel locate training on energy aspects of specific practice standards, technologies and program policy. This matrix will be housed on the Energy SharePoint site at <https://nrcs.sc.egov.usda.gov/st/wntsc/energy/default.aspx>.

**Tools:** NRCS is in the process of testing the Cropland Energy Estimation Tool, an excel-based planning tool developed by Washington State to assist planners evaluate energy inputs and outputs on cropland. A team consisting of individuals from 10 states representing all three regions is evaluating the tool for various types of cropland agriculture to determine its utility and ease of use as well as its potential compatibility with the Conservation Desktop. Results from the test are due September 1. A recommendation regarding use of the tool nationwide will be provided to Agency leadership before the end of the fiscal year.

**Practice Standards:** Work is continuing on development of stand-alone energy conservation practice standards (CPS) to eventually replace CPS 374, Farmstead Energy Improvement. CPS 670, Lighting System Improvement is in its second round of review. The next version will be posted to the Federal Register. This CPS should be available for use in EQIP in FY-13. CPS 672, Building Envelope Improvement, has just completed its first round of review. A new version will be posted to the NHCP FTP site by August 1 for the second round of review. This standard may or may not be available for use in EQIP FY-13. A team has been assembled to work on CPS 673, Ventilation Improvement, but the CPS has not yet been posted for agency review.

**CDSI Integration:** In May, the Energy Technology Development Team met with Frank Geter, CDSI Team, to discuss integration of energy tools into the CDSI framework. Discussion included the existing tools, proposed tools, and identified where they would be housed and how they would be used within CDSI. Some of the tools fit best in the Client Gateway, while others are more suited to the Conservation Desktop and still others may be housed outside the CDSI software framework. A summary of the Energy Tools Integration Plan was presented at a planning business processes and applications meeting in Washington, DC on May 31.

