NRCS
Natural Resources
Conservation Service

1201 NE Lloyd Blvd., Suite 1000
Portland, OR 97232

West National Technology Support Center

Second Quarter Report
FY 2013

A Message from the Director

As in the first quarter of the fiscal year, budget uncertainty continued in the second quarter. Congress passed another Continuing Resolution that incorporated "sequestration plus" budget reductions. As a result of the budget uncertainty, we are seeing a reduction in the number of assistance requests from the States. This seems to be most pronounced in the area of training. I urge all of our customers to focus on maintaining the technical proficiency of our employees. We can explore alternative methods to support training within our new budget constraints.

The soil health initiative is gaining momentum. We are learning about some remarkable results that have been achieved by farmers that have been experimenting with integrating reduced tillage and high diversity cover mixes into their crop production systems. I believe the key to advancing this new way of farming is to identify, support, and document the experiences of these innovative farmers.

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.

- Bruce Newton

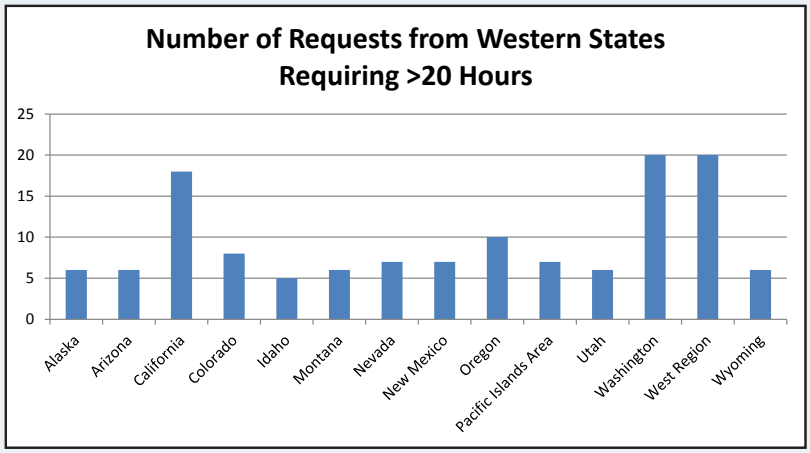
Core Team Highlights:

Continued Development on Forested Ecological Site Descriptions

For *Craig Ziegler, Forester,* this past quarter saw a continued emphasis on forested ecological sites. Several western states and regional soil survey offices are starting or continuing their development. In March, Craig and WNTSC Soil Scientist Steve Campbell, provided training to Washington State ESD specialist Cindy Burton and soils staff from the Olympia and Mount Vernon soil survey offices on utilizing existing forest-soil data in ESD development. The data was collected in the 1970's and 80's as part of a NRCS-Washington Department of Natural Resources effort, with over 1,500 plots taken. The staff was shown how to geospatially display the data and how possibly to use it in ESD development.

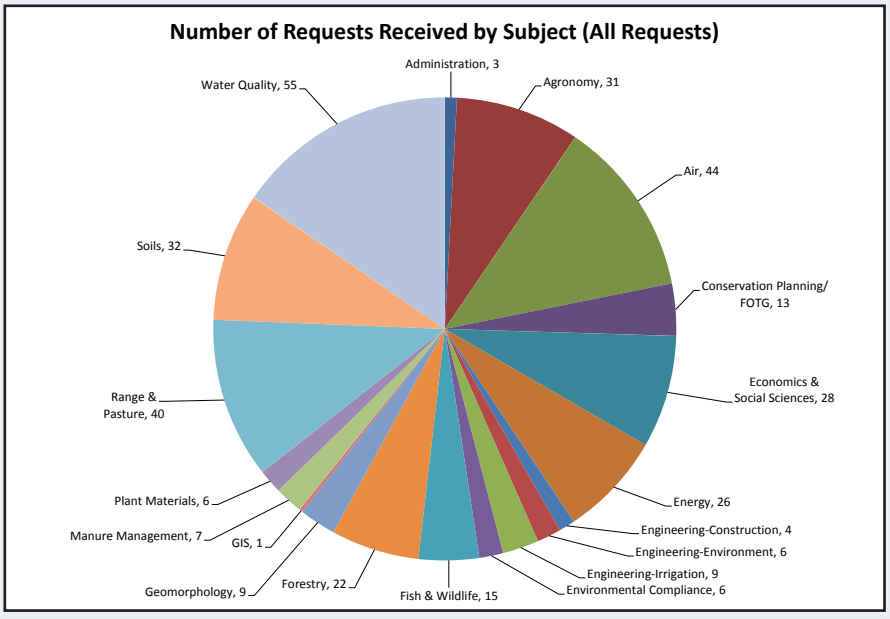
Craig also worked with the Portland regional soil survey staff, Oregon state forester and US Forest Service regional staff on ecological site description development. The area selected crosses the boundary between private forestland and federal lands. Within the area new NRCS plot data and existing USFS data will be used to develop the site description.

WNTSC Assistance Analysis
First and Second Quarter FY 13



Number of Requests by Location	All Requests	>20 hours
All States	112	78
Central Region States	16	8
National Headquarters	50	34
Northeast Region States	16	7
Southeast Region States	13	7
West Region States *	150	86
Total	357	220

* includes multi-state and region-wide requests



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

Potential site to collect data for describing the reference community in a Douglas-fir forest

Western Juniper Soil Interpretation

Steve Campbell, Soil Scientist, is assisting NRCS Oregon in the development of a soil interpretation in the National Soil Information System (NASIS). This interpretation is designed to predict the vulnerability of rangeland soil map unit components to encroachment by western juniper (Juniperus occidentalis).

The rapid expansion of western juniper into neighboring plant communities during the past 130 years has caused considerable concern because of increased soil erosion; reduced stream flows; reduced forage production; altered wildlife habitat; changes in plant community composition, structure, and biodiversity; and the replacement of semi-arid plant communities with woodlands. [1]

The first draft of the juniper encroachment potential soil interpretation uses the following soil properties:

- Soil temperature regime
- Soil pH
- Drainage class
- Landform position
- Mean annual precipitation
- Depth to bedrock or duripan
- Clay content of the surface horizon
- Surface cover of cobbles and stones

One potential use of this soil interpretation is to help in targeting EQIP funds for juniper removal cost-share contracts. Soils with a higher potential for juniper encroachment could potentially receive higher ranking for EQIP funds to remove juniper. The interpretation is also designed to identify potential old-growth juniper sites, which should be avoided during juniper removal projects.

Reference

1. Miller, Richard F. et al. 2005. Biology, Ecology, and Management of Western Juniper. Oregon State University Technical Bulletin 152.

Western juniper encroaching into a mountain big sagebrush and Idaho fescue plant community in eastern Oregon. http://oregonstate.edu/dept/EOARC/pinon-juniper/gallery/pages/juniperflat_JPG.htm

California PMC Open House Held

Jim Briggs, Plant Materials Specialist, participated in the California PMC Open House held in March. Approximately 75% of the 90 people attending were NRCS Field Office staff. In addition to learning about current activities at the PMC, they received detailed information about several specific projects including trials evaluating plants for rangeland improvement, demonstration of cover crops adapted to California, a cover crop - soil health study attempting to document specific soil health improvements, and pollinator habitat demonstrations.

California State Agronomist demonstrating cover crops adapted to California

Jim continued work on development of a national seed calculator tool in collaboration with counterparts in the East and Central NTSC, and Mississippi State University. It is anticipated that a prototype model will be available for testing by pm staff later this FY.

Also in final development is a national Technical Note which provides basic plant information on potential biofuel crops emphasizing their potential invasiveness and suggested protocols to minimize their impacts if moved into commercial production.

Environmental Engineering in the West

Sally Bredeweg, Environmental Engineer, is focusing on building an active and working relationship with each of the NRCS Western States. The West Region Environmental Engineering (EE) Consortium members have been her state specific contacts to help facilitate this effort.

The EE Consortium is an important venue for the WNTSC to work together with all the Western States and Pacific Islands Area region to address environmental engineering concerns. The EE Consortium has recently gotten a new chairperson, Punya Khanal, CE from AZ and a new State Conservation Engineer mentor, John Harrington from CA. The Consortium schedules a teleconference quarterly to discuss topics of state, regional or national interest related to NRCS Environmental Engineering and transfer technology tools to provide that assistance. A few examples of the issues the EE Consortia is addressing are Construction and Material Specifications for flexible membrane liners and the use of the AWM software and the AWMFH (Animal Waste Management Field Handbook) design guidance for the site evaluation of waste storage structures.

During the first 18 months Sally worked at the WNTSC she had the opportunity to visit Colorado, Nevada, Oregon, Utah, Washington and Wyoming.

The West Region is an extensive territory and has a wide range of type and scale of animal operations. If your state or region has a concern related to environmental engineering please call or email Sally Bredeweg. Each chance she has to talk with staff or visit an area helps her to get to know the territory better.

The West NTSC service territory

Nutrient Management Assistance

Although travel has been much reduced compared to previous years, *Richard Fasching, Conservation Agronomist,* has been busy providing direct assistance to states through other methods including teleconferences, emails, phone contacts, and video teleconference. Nutrient management has been the predominant conservation concern that Rick has been working with states on the most. Since the release of the 2012 Nutrient Management standard, most western states are making several changes to their state standard that are significant for producers. Some of these changes include the addition of technical criteria to the standard, overhaul of the phosphorus index, providing training for both nutrient management and CNMP planning, and working with regulatory agencies.

Rick is also leading a national Adaptive Nutrient

Management Team. The Team is completing an Adaptive Nutrient Management Technical Note 7 (scheduled for release in May 2013), coordinated the third webinar pertaining to adaptive nutrient management, and will conduct a fourth webinar scheduled for May 2013. Under Rick's leadership, the team developed a training program that would enable states to adopt ANM process in their state through a multi-year demonstration project. That proposal is still being reviewed for approval at the regional and national level.

Rick has also provided direct technical assistance to states on the topics of MMP and MMP smart documents, compliance issues of the 1985 Food Security Act, and WEPS (wind erosion prediction system). He is also providing direct assistance to NHQ and RMA concerning national cover crop utilization and assisting with the development of HELC/WC modules for CDSI.

NATIONAL TECHNOLOGY DEVELOPMENT TEAM ACTIVITIES

Air Quality and Atmospheric Change

The Air Quality and Atmospheric Change Team Supports the USDA Agricultural Air Quality Task Force

The USDA Agricultural Air Quality Task Force (AAQTF) was created as part of the Federal Agricultural Improvement and Reform Act of 1996 (Farm Bill), to advise the Secretary of Agriculture on issues related to agricultural air quality. Over the past 16 years the AAQTF has been very instrumental in advising the Secretary about critical agricultural air quality issues. The Task Force's mandate is to strengthen and coordinate USDA's air quality research effort and identify cost effective ways for the agricultural industry to improve air quality and meet Federal and local air quality emissions requirements. The AAQTF is chaired by the Chief of the NRCS, and membership consists of leaders in farming, industry, and research sectors, as well as the Forest Service, the Agricultural Research Service, and the National Institute of Food and Agriculture.

Greg Johnson, leader of the Air Quality and Atmospheric Change Technology Development Team is currently the Designated Federal Official for the AAQTF. Over the past few months Greg has worked with NRCS Civil Rights and the Outreach and Advocacy Division to advertise the solicitation of nominations for the new AAQTF. Nominations for the 2013-2015 AAQTF were submitted to Greg by April 1, and a selection team of NRCS, FS, NIFA, ARS and EPA individuals made membership recommendations to Acting Chief Weller on April 19. There are typically 20-26 members on the AAQTF. It is anticipated that the new AAQTF members will be announced by the Secretary in May, and a late summer first-meeting of the AAQTF is planned. There are typically 2-3 face-to-face meetings of the AAQTF each year. The current AAQTF charter was filed with Congress on April 15, and will expire on April 14, 2015.

Key topics that the AAQTF will likely address in the coming two years include a revised fire/smoke policy that EPA has been developing; the treatment of biogenic greenhouse gases in a regulatory framework, with agricultural and forestry implications; emission factors, regulatory direction and mitigation options for air emissions from confined animal feeding operations; regulatory treatment of agricultural sources of reactive nitrogen, including ammonia; and the measurement, monitoring and management of particulate matter from agricultural/rural areas.

For additional information on the AAQTF please visit the following Web site: http://www.airquality.nrcs.usda.gov/wps/portal/nrcs/main/national/air/taskforce

Greenhouse Gas Conservation Innovation Grants Making Great Progress

Adam Chambers on the Air Quality and Atmospheric Change Team continues to provide leadership to a special round of Conservation Innovation Grants (CIGs) focused on reducing greenhouse gas (GHG) emissions and enhancing carbon sequestration through conservation. The atmospheric emissions focus of the CIGs is coupled with an environmental markets component. Once conservation practices are implemented and the emissions reductions are achieved, the CIGs are investigating the generation of carbon credits that can be exchanged in voluntary and regulatory markets. Several

of these CIGs already have produced marketable credits that have been purchased. In addition to the grant funds, NRCS has committed $10 million in EQIP funds to help CIGs recruit producers. This spring 13 states throughout the country will be signing EQIP contracts with producers to benefit the efforts of the GHG CIGs. The Agency has never previously integrated CIGs with additional producer assistance under EQIP. The AQAC Team has been instrumental in leading this first-time effort and ensuring that conservation and environmental credits are achieved and that Farm Bill legal requirements are met. There has been more than $30 million in demand for this special EQIP assistance effort thanks to the communication efforts of many NRCS offices and the engagement of the GHG CIGs.

Energy

A dominant theme in the recent quarter revolved around the Agricultural Energy Management Plans or AgEMP Reports. Issues addressed both the AgEMP Headquarters (CAP 122) and AgEMP Landscape (CAP 124). States across the country sought help to develop contracts for new AgEMP work or evaluate reports submitted for payment. Many of the questions concerned interpretations of the American Society of Biological and Agricultural Engineers Standard S612, Performing On-Farm Energy Audits (Jul 2009) in relation to the AgEMP criteria.

Coordinated efforts with the NHQ staff on the Technical Service Provider team continued to review sample AgEMP Reports from prospective TSPs to reduce delays in the evaluation process. At the close of the quarter, Conservation Engineering Division was able to fill a position with a rehired annuitant to focus on the backlog of sample AgEMP Reports and support State design review of Farmstead Energy Improvement (374). Dan Meyer, former National Agricultural Engineer before his retirement, will be in this position (0.5 FTE) through March 2014.

Two ad hoc teams that had previously drafted the new Lighting System Improvement (670) and Building Envelope Improvement (672) standards convened to finalize documents for official posting of the Conservation Practices. Support documents have been submitted also. A review and revision of payment scenarios related to each will be support these new standards expected to be available for use by States with the FY14 EQIP cycle.

A remote training session supported an NRCS-KY Technical Service Providers workshop. The session covered background information on the CAP 122 (Headquarters) and 124 (Landscape) Agricultural Energy Management Plan criteria, auditor requirements, and related processes.

The 12th Annual Harvesting Clean Energy Conference was hosted by Oregon State University in January. Primarily a four-state (WA/MT/ID/OR) conference, HCE2013 delivered a wide array of agricultural - including forestry - issues. As a steering committee member and panel moderator, the role of *Kip Pheil, Acting Energy Team Leader* was focused strongly on the 'Energy Self-Sufficiency for Agricultural Producers' track. The track presented a balanced approach of energy efficiency and use of renewable resources to move producers towards net-zero farming.

Support of the West Region Energy Consortium continues with most activity dispatched to two working groups. The first is drafting a template Job Approval Authority for Farmstead Energy Improvement (374). The second is AgEMP Reports to better align the expectations and interpretations of CAP 122 and 124 criteria for quality assurance. The second group will also look at NRCS energy training related to a broader range of energy activities.

Water Quality And Quantity

The WQQT has been engaged in developing new technology in a number of areas recently. Three team members are completing their details to the Conservation Desktop Streamlining Initiative (CDSI). The focus of their work is aligning the nutrient and pest management processes (and tools) with the overall planning process. In conjunction with the CDSI staff they updated the procedures to include information derived from the Conservation Effects Assessment Project (CEAP). The team continues to make large investments of time to ensure that critical water quality and quantity tools are included appropriately in CDSI.

The team continues to support and develop the Water Quality Index for Agriculture Runoff (WQIar). This simple assessment tool returns an integrated index number to communicate the many aspects of water quality. The WQIar is currently being pilot tested with

the National Water Quality Initiative. Using the WQIar will allow NRCS to both document the current status of water quality as well as establish trends attributed to the Initiative's activities. Further, a national partner, the Field to Market group has embedded the WQIar into their Fieldprint Calculator tool to assess water quality for their membership.

The team continues to support the field with both training sessions and direct assistance on projects such as stream restoration. They also recently complete an assessment of past stream work in Washington and Oregon. Work is progressing to document the success and lessons learned in a Technology Note to share these findings. Finally, the engineering staff out of Utah worked with Team members to deploy an acoustic doppler velocity profiler on three engineered log jams (ELJ) in Western Washington. The purpose was to analyze and compare velocity profiles and patterns on functional and non-functional ELJ's.

Deploying the acoustic Doppler to collect velocity profile data.