

A Message from the Acting Director



*Former Director,
Bruce Newton*



Steve Stinton Ranch, San Luis Obispo, CA

Change seems to be one of the themes these days not only at the West National Technology Support Center (WNTSC), but throughout the landscape. One of the most obvious changes is the retirement of Bruce Newton. Bruce's leadership helped to form the Center and his guidance from its inception ensured that the Western States had a focal point to turn to for technical needs. One of Bruce's constant messages was that the Center must be responsive to the needs of our States and the issues that affect them. The core team, coupled with the National Development Teams for Air Quality and Atmospheric Change, Energy and Water Quality and Quantity represent an incredible resource ready to assist states and further technology development.

The one constant in our work is the continuous need to deliver sound conservation assistance to working lands. As staff and issues continue to change, the WNTSC along with our Advisory Committee will continue to provide top notch assistance. I want to personally thank Bruce for his years of leadership and providing an outstanding roadmap for tomorrow. Although change is inevitable, our good work in conservation will continue.

- Shaun P. McKinney

CORE TEAM HIGHLIGHTS:

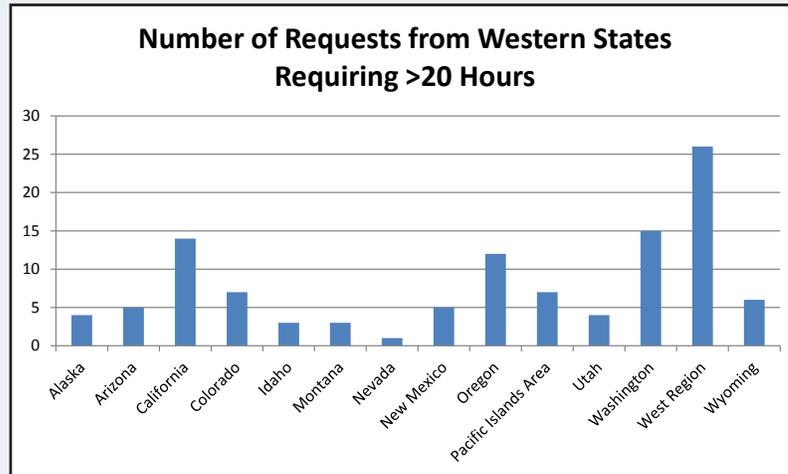
Plant Materials

Jim Briggs, Plant Materials Specialist, assisted Casey Burns, State Biologist, NRCS Utah, with coordinating and presenting a 2-hour plant materials webinar for Utah field office, state, and area staff in June. Presentations were provided by the New Mexico, Arizona, Idaho, Nevada, and Colorado plant materials staff. Current and future Utah technology needs were identified and strategies to address those needs are currently being developed.

Assistance provided to other Plant Material Centers this quarter included technical review of various field office focused technical notes such as the 24-page "Roses of the Inland Pacific Northwest - Native and Invasive Species Identification, Biology and Control", produced by the Washington PMC and the 65-page "Plants for Pollinator Habitat in Nevada" produced by the Nevada PMC. Both publications can be accessed from: <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/plantsanimals/plants/techpub/?cid=stelprdb1044847>. Plant guides, and other informational products were reviewed and guidance on PMC studies related to soil health, and multi-PMC cultivar adaptation studies was given.

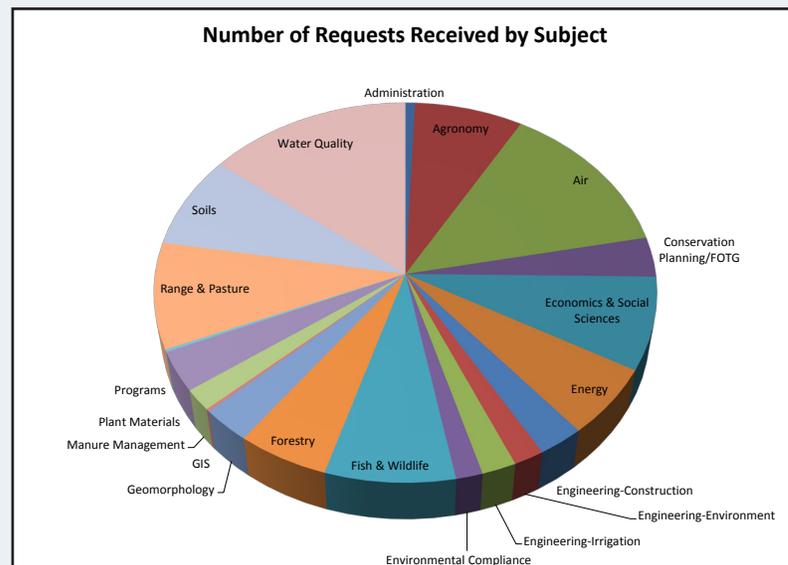
WNTSC Assistance Analysis

First, Second, and Third Quarters FY 13

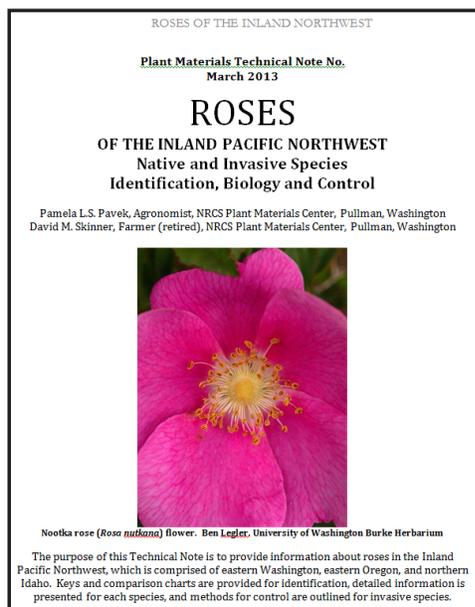


Number of Requests by Location	All Requests	>20 hours
West Region States *	183	112
East Region States	18	10
Central Region States	23	12
Southeast Region States	15	9
National Headquarters	62	42
All States	140	94
Total	441	279

* 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.*



“Roses of the Inland Pacific Northwest - Native and Invasive Species Identification, Biology and Control”

Rangeland Management

Washington Holds Range Inventory and Assessment Training

Washington State’s Ecological Sciences staff and WNTSC’s *Rangeland Management Specialist, Gene Fults*, held a series of field training and webinars designed to; 1) improve the quality & consistency of inventory, assessment, and analysis on rangeland, 2) provide experience in completing a range inventory for new employees, and 3) improve the ability and skill of experienced employees to “Read the Landscape”. These are important skills needed for planning and contracting rangeland properties.

Employees were trained to recognize differences in Ecological Sites on the landscape, and to assess the qualitative departure from reference conditions using the seventeen Rangeland Health indicators. Each Ecological Site has a unique reference sheet describing the Rangeland Health conditions of soil, hydrologic, and biotic indicators.

The class started by examining a site with low disturbance and long-term light use. They noted the diverse Ecological Sites present and how the Rangeland Health indicators varied depending on their location

on the landscape. The class then observed the same Ecological Sites at a location managed under a ranch level of intensity. Each participant evaluated the area, and ranked the degree of departure of the Rangeland Health indicators. A group discussion followed as participants defended their assessments by describing the visual characteristics of the indicator as it related to the Ecological Site reference sheet.



Students observe Ecological Sites (ES) on lightly used and heavily grazed locations.

Soils

Soils for Conservation Planners Training Session - Indio, California

Steve Campbell, Soil Scientist, served as one of the instructors in a “Soils for Conservation Planners” training session in Indio, California, along with Area Resource Soil Scientists Peter Fahnestock and Ken Oster. The session took place May 1-2, 2013. Training participants included 18 NRCS Conservation Planners from field offices throughout southern California.

The training was designed to help conservation planners evaluate soil properties, both inherent and management affected, as an integral part of conservation planning. Most of the session was hand-on in the field.

Core Team continued

Topics included identification of major soil horizons, soil texture, structure, root-restricting layers, and indicators of a high water table.

The session also included the relationship of soil survey map units to landforms and geologic material. Participants were trained in how to recognize inclusions of contrasting soils within soil map units.

The participants used the Soil Quality Field Test Kit to evaluate soil properties that can be affected by management, such as compaction, water infiltration, aggregate stability, pH, and salinity.



Participants use a Soil Quality Field Test Kit to evaluate soil properties in Indio, CA.



Forestry

Craig Ziegler, Forester, kept busy providing Ecological Site assistance to western states. The states were assisted with identifying ecological sites, developing state and transition models, identifying natural disturbance regimes and protocols for data collection. In Oregon, an ESD is being developed on the Willamette National Forest TEUI/Soil Survey project. He assisted in community phase identification in the field and data collection for use to complete the ESD. In Idaho, ecological site identification and data

collection training was provided to NRCS and USFS soils staff and ecological site specialists.



Idaho staff conducting continuous line transect survey

Craig also assisted Oregon with the Healthy Forest Reserve Program (HFRP). A new sign-up held by Oregon brought the need for evaluating and ranking landowner applications, meeting with landowners and developing long term restoration plans that provide for timber harvesting and also establishing habitat suitable for northern spotted owl. On existing HFRP easements he assisted Oregon State Forester, Misty Seaboldt, with training landowners on marking timber for harvesting that is in compliance with their individual restoration plan.

Environmental Engineering

Frank Wisdom

Recently *Sally Bredeweg, Environmental Engineer* spent a week with NRCS Colorado Area 2 staff. The purpose of the trip was to review the comprehensive nutrient management planning process for EQIP contracts associated with CAFO/AFO producers. The staff shared their projects and included a number of site visits with landowners.

The opportunity to visit Colorado and ground truth the process was very helpful to understand the particular challenges and problems faced by these operations. Colorado is unique as a state where precipitation is limited, there are no external sources of water flowing into the state and all the surrounding states have Compacts that require some level of water to flow out of Colorado for their needs. Significant economic drivers also

demand water for irrigated agriculture and urban development in the state which results in a Colorado Water Law that trumps all other water management strategies.

All water uses in Colorado are tightly managed; even evaporation is measured and accounted for. The Colorado Water Law requires that the management and application of liquids collected from runoff and contained in animal waste storage structures also meet the state water law. Therefore the CNMP process for liquid wastewater management collected from the runoff of animal production operation in this part of the country is based primarily on management required by state water law.

Frank was one of the landowners Sally had a chance to interview on this trip. He was very satisfied with the assistance NRCS had provided and felt like it fit well with his operations. During this visit Frank commented that with all the regulation and planning that state and federal agencies do, it is important to remember that “No ‘one plan’ fits all sites! Each place has different problems requiring different solutions.”

Franks’ words explain why the NRCS planning process steps are so important. Each location, landform and operation is unique. The assistance NRCS can provide through the CNMP process must be built on the basis of the specific landowner’s management and goals as well as the natural resource concerns and the state laws.



*Frank, Colorado
CAFO landowner*



NATIONAL TECHNOLOGY DEVELOPMENT TEAM ACTIVITIES

AIR QUALITY AND ATMOSPHERIC CHANGE

Constructed Windbreaks for Feedlot Dust Control

There are some certainties in life – death, taxes, and the wind blowing in Wyoming. Recently, NRCS Wyoming began working with a feedlot owner in southeast Wyoming to address dust emissions generated from a feedlot and deposited on a house downwind. Since this area of Wyoming receives very little rainfall, traditional vegetative windbreaks around the edge of the feedlot will take several years to reach a level where they will provide protection. And even then, the windbreaks will only protect a portion of the feedlot surface near the windbreak.

NRCS Wyoming received a variance under Heavy Use Area Protection (conservation practice standard 561) to install solid windbreak wall panels within the feedlot to provide wind speed reduction and a corresponding reduction in dust emissions from the feedlot. However, NRCS Wyoming found little guidance related to proper spacing of the solid windbreak panels within the feedlot, so they contacted the National Air Quality and Atmospheric Change (AQAC) Team for assistance.

Greg Zwicke, Air Quality Engineer, National AQAC Team, visited the site several times, talked with the feedlot owner and NRCS Wyoming staff, and reviewed local meteorological data and literature related to protection areas for solid windbreaks. Recently, Greg provided NRCS Wyoming with recommendations for spacing distances for the solid windbreak walls, and will work with NRCS Wyoming staff to finalize designs for the feedlot. The information obtained in this effort will assist in future planning efforts for mitigating wind-borne dust from feedlots nationwide. The feedlot owner expressed interest in using the feedlot as a demonstration site for a potential future Conservation Innovation Grant or other applied research projects.

WATER QUALITY AND QUANTITY

Water Quality Resource Assessment Course 2013

This year the NEDC “Water Quality Assessment Course” was hosted in Little Rock, Arkansas, May 14th through May 17th at the National Water Management Center and several nearby stream sites. Field work occurred in streams in the vicinity ranging from poor to good water quality conditions. The instructor cadre included *Shaun McKinney, Leader, W. Barry Southerland, Fluvial Geomorphologist, National Water Quality and Quantity Team*, Dean Krehbiel, State Resource Conservationist, NRCS Kansas, and Thom Garday, NWMC.



Macro-invertebrate identification and evaluation, SVAP 2, fluvial geomorphology, stream dynamics, and channel evolution condition and trend analysis, water quality conservation planning and problem solving, and estimating the response of aquatic systems to changes in phosphorus and nitrogen inputs were the subjects covered during the in-class and on-stream data gathering and analysis. Three teams of eight to nine individuals gathered data, presented and compared reports the final day.

Conservation Effects and Assessment (CEAP) Streambank Erosion Pin Rates and Condition Class Categories

Dr. Southerland completed CEAP technical assistance, training and planning along with the Kansas State NRCS Dean Krehbiel and the Cheney Lake Watershed Company of the Reno Conservation District in Salina and Hutchison the week of June 17th through June 21st. The summary of data, analysis, GIS, particle size distribution of banks and beds, and LIDAR needs sections were completed for the upcoming Streambank Erosion and AGNPS Report. Some field sites on the mainstem were visited to measure erosion sites and pins capturing the 2013 runoff stages. The primary purpose of the

five-year study is to establish streambank erosion rates relative to high flow durations above inner-berm stage by class and condition and to calibrate the CEAP AGNPS Model.



*Measured and Validated Erosion Category “Severe” at
Holcomb Pin Site on the North Fork of the Ninescah*

Hydrologic Analyses of Post Wildfire Conditions Technical Note Developed

The 2012 wildfire season in the Western US burned many records into the history books. This year’s wildfires got off to an early start, and forecasters have predicted another severe one. Numerous NRCS Western states were active in last year’s events, including Colorado, Utah, New Mexico, and Washington. In the intervening months the National Water Quality and Quantity Team led the development of a national technical note “Hydrologic Analyses of Post Wildfire Conditions.” This June Dr. Steve Yochum, Hydrologist, NRCS Colorado, and co-author of the technical note, used the techniques for an analysis of the Black Forest Fire near Colorado Springs.

The technical note, currently under review, provides guidance for hydrologists to model burned watersheds and estimate increased flood peaks. The note also explains the roles of the numerous Federal agencies involved in wildfire, not only fire-fighting, but also preparation, education, and mitigation of post-wildfire effects. One of the important roles of NRCS is the Emergency Watershed Protection program (EWP). For example, in 2012 the NRCS New Mexico office coordinated on the Whitewater-Baldy Complex fire to bring EWP funding for installation of a number of mountain precipitation gages. These gages provide early warning of flooding for downstream communities.

The technical note also provides hydrologists with specific guidance for development of watershed

hydrologic models. These computer models enable the estimation of floods and take into account changes in the landscape caused by fire. Loss of vegetation and fire-induced soil water repellency are important factors. Four extensive case studies are included, which demonstrate good modeling practice and various analysis methods that are available to the hydrologist. The use of Geographic Information Systems (GIS) is also covered.

Whitewater-Baldy Complex Fire, May 2012



*Whitewater-Baldy Complex Fire,
May 2012, near Nabours Mountain
directly east of Glenwood, NM*

USDA Forest Service, Gila National Forest, Silver City NM

