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2011 Final Report

Issue 5

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From the Director



It has been busy and exciting times at the NDCSMC, assisting you in implementation of Farm Bill work, American Recovery and Reinvestment Act (ARRA) projects, and training of NRCS and conservation partner staff.

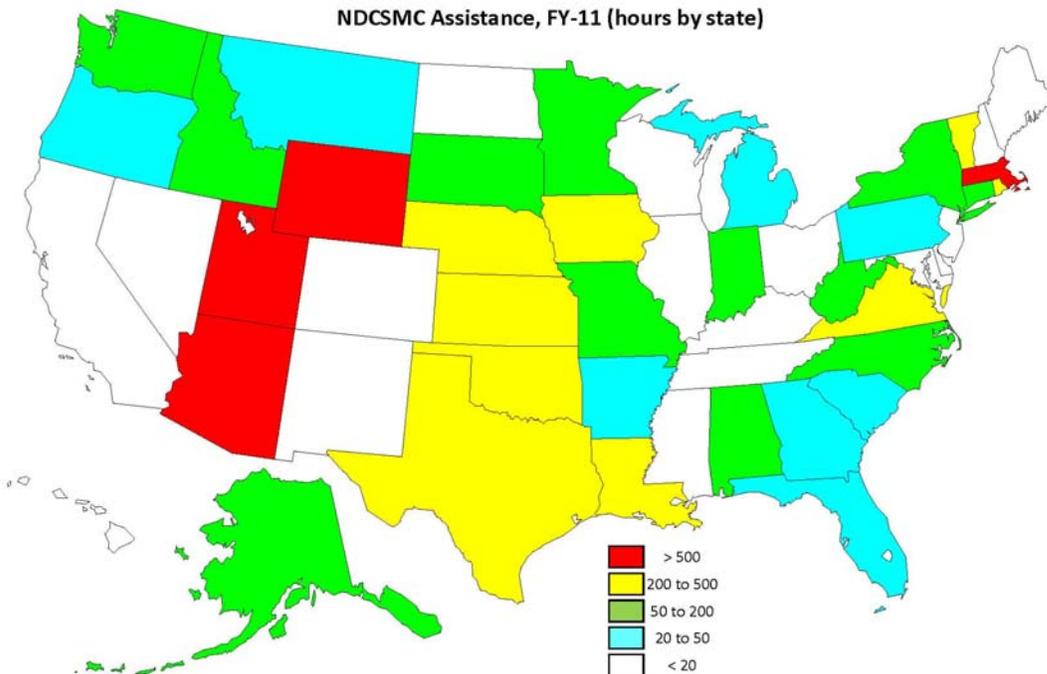
The NDCSMC continues to be available to provide assistance on complex engineering projects as needed. The graphic below is for calendar year 2011 pulled from WebTCAS data. This doesn't count every hour in every state, but does capture items such as independent reviews, assistance with workshops, trip reports, and engineering investigations.

Assistance on ARRA projects is drawing to a close now, but based on workload we see coming in, we can tell that you are still working on complex engineering projects—shifting some focus from dams to items such as concrete waste storage structures and EWP designs.

Don't hesitate to ask for help if you need it— we are here to help you!



NDCSMC Assistance, FY-11 (hours by state)



* Source, WebTCAS

We're on the web!!

www.ndcsmc.nrcs.usda.gov

**Conservation ...
Our Purpose.
Our Passion.**

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Flow overtops an earth embankment at the ARS Hydraulic Engineering Research Unit Laboratory in Stillwater, OK as part of the WinDAM B development efforts.

WinDAM B 1.0 Released

NRCS, in partnership with the Agricultural Research Service and Kansas State University, released version 1.0 of WinDAM B software this summer. WinDAM B assists NRCS engineers in analyzing existing dams for rehabilitation and designing new dams. WinDAM B provides the dam designer with additional performance alternatives not available in the traditional SITES design software that NRCS engineers use to design dams.

One feature of WinDAM B is the ability to investigate the performance of multiple auxiliary spillways for a

dam. For example, when a flood control structure's downstream area changes from rural to urban the structure needs to be modified to safely handle a larger design storm event. As a result, an additional auxiliary spillway may be excavated around the dam. WinDAM B describes how multiple auxiliary spillways function during a flood event.

In addition, WinDAM B software is a useful tool to analyze existing dams' performance during overtopping and to determine which dams should be rehabilitated first.

For more information about the WinDAM B software and training, contact Karl Visser, Hydraulic Engineer, at karl.visser@ftw.usda.gov.

You can find the user guide for WinDAM B in E-Directives, filed as UG 210-12-1.

Contact your local ITS staff to request installation of the CCE certified version on your NRCS workstation.

Each state now has a way to share their standard drawings with all of NRCS.

National CAD Share Point

A voluntary repository of state-developed standard drawings has been established by the NDCSMC at the following link: <https://nrcs.sc.egov.usda.gov/st/ndcsmc/CAD/>. In the future, this site may be expanded beyond its current contents. Read-only access has been provided to all eAuth users.

Each state has been provided an opportunity to name two people who will be granted permissions to upload to a temporary holding directory prior to NDCSMC populating the drawings to the eAuth accessible site.

The NDCSMC will monitor the files that have been uploaded to the temporary directory and add sorting fields before moving the files to the fully accessible eAuth site.

FAQs on these drawings

1. No review or drawing design acceptance is provided for uploaded files.
2. Each SCE decides what materials are uploaded by their state.
3. Questions on supporting documentation for each drawing is referred back to the SCE of the origi-

nating state.

4. Each state is encouraged to upload both pdf and dwg versions of their standard drawings, along with any supporting documentation or design assumptions.

5. It is expected that people with upload permissions have a rudimentary background of uploading and using SharePoint.

Questions and comments on the National CAD Share-Point site can be directed to johnny.green@ftw.usda.gov or Kathy.J.Miller@ftw.usda.gov

Trilateral Watershed Rehabilitation and Irrigation

The Natural Resources Conservation Service (NRCS) combined forces with the USDA Foreign Agricultural Service, Colorado

State University, and the Cochran Fellowship Program to conduct a study tour for The Trilateral Watershed Rehabilitation and Irrigation Technology Working Group in September 2011. As part of a larger effort between

the United States, Afghanistan, and Pakistan, the members of the trilateral working group were provided with an opportunity to view several watershed treatments and irrigation technologies used in the United States, with the ultimate goal being that all parties would have a greater understanding of efficient water management practices and watershed rehabilitation

to increase crop yields.

NRCS specialists from the International Program Division, NDCSMC, the Central



Trilateral team reviews large scale drip irrigation system in Jackson County, Oklahoma.

and East National Technical Support Centers, and Oklahoma combined their knowledge and skills to lead the study tour. The group traveled to Texas, Oklahoma, and Colorado to focus on areas of the United States that have landscapes and climactic conditions in common with Afghanistan and Pakistan. A dialogue among the working group members,

technical specialists, planners, local farmers, and ranchers provided insights into how to implement sustainable practices under challenging conditions.

Demonstration projects were visited to showcase the efficient use of irrigation water, which also highlighted the value of soil and water conservation efforts.

At the journey's end, members of the trilateral working group had fresh ideas and first-hand knowledge of a series of soil and water conservation systems, and were better informed about practices and technologies that are available to them and that may be adapted for use in their homelands.

ASTM Portal



Every eAuth user now has access to the entire ASTM standards library.

ASTM standards are now available to all NRCS employees through the "ASTM Custom Collection Web Portal" or "ASTM Portal" at <http://usda.citation.com>.

This new service will allow NRCS employees to access any ASTM standard, regardless of whether the standard is explicitly referenced in NRCS specifications.

In addition to providing access to standards, the ASTM portal contains other features not previously available on the ASTM Share Point Library.

As a reminder, ASTM licensing requirements strictly prohibit electronic distribution of ASTM standards.

Your reference is National Bulletin 210-11-6, and your contact is Dennis Clute, dennis.clute@ftw.usda.gov

Science and Technology Conservation Tools Software

Many of the conservation tools developed by NRCS and other government partners are now available for download by the general public. This is something that has long been requested by Technical Service Providers (TSPs) and conservation partners working with NRCS.

The download page for these programs are located at: www.nrcs.usda.gov/wps/portal/nrcs/detail/national/ndcsmc/?cid=stelprdb1042198

These programs are the equivalent of NRCS CCE certified programs but contain a disclaimer.

As with any engineering software, use of these programs should not be con-

strued as a replacement for professional engineering services. Anyone using the software must abide by professional engineering license and design requirements within their state, county, or city.

No offer of technical support is provided by NRCS in conjunction with the use of these programs.



Many tools developed by NRCS are now available for TSPs to download and install.

National Guard ADT Workshops

In January and September 2011, the NDCSMC, CNTSC, USDA-FAS, NRCS-IPD, USDA-USFS, and NRCS Nebraska partnered to provide training to the Nebraska and Texas National Guard Agri-business Development Teams (ADT).

Two five-day workshops focused on the planning, design, and implementation

of small scale projects to put people to work at rehabilitating degraded watersheds in Afghanistan. Topics included a variety of basic soil and water conservation techniques as well as flood control, reforestation, and water supply/filtration.

The technical areas were also taught by some of the instructors in Afghanistan to both US military personnel and Afghan nationals as part of ongoing support provided by NRCS. The training was well received and representatives from the deployed units have maintained contact with the instructors.



Looks like a chicken wire basket to me—and we are going to fill this with rocks?

Design review needs increase

The NDCSMC is seeing more work on complex designs during the last 10 years.

The graph to the right shows the number of design reviews completed by the NDCSMC since it was established in 2000. This graph displays very well the trend of increasing the number of design reviews needed each year.

This graph also depicts a peak in FY-10, which is attributed to the increased workload with supplemental ARRA funding.

Private consultants were used to assist the NDCSMC in accomplishing ARRA reviews.

NDCSMC Design Reviews since 2001





National Design, Construction and Soil Mechanics Center

National Design, Construction, and Soil Mechanics Center

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VISION: Excellence in application of conservation engineering technology.

MISSION: To provide interdisciplinary technical support for design, construction, operation, and rehabilitation of complex engineering projects essential to resource conservation, environmental enhancement, and agricultural productivity.

PRODUCTS: Products are service based and include engineering technology development, technology transfer (e.g., workshops and formal training), independent reviews, and site specific soil mechanics testing and/or production design work in support of Field and State Office operations. Products also include expert consultation to NRCS Headquarters, Centers, State Offices, Field Offices, and Design Teams.

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Welcome



John Van Leeuwen is a structural engineer on the NDCSMC staff. He came to NDCSMC in December 2010 from the U.S. Army Corps of Engineers—

Fort Worth District where he had served as the Chief of the Structural Section starting in 2003. Prior to moving to Fort Worth, John worked with the Corps in the Tulsa District, OK on military building projects and civil works projects including flood control, dam safety projects, and inspection. He has earned B.S. and M.S. degrees in Civil/Structural Engineering from Oklahoma State University. He is a registered Professional Engineer in the State of Oklahoma. John is married and has two very active children.



David Williams is a Design Engineer. He came to the NDCSMC in November 2011 from the NRCS Missouri State Office where he had served as the State Construction Engineer since 2002.

From 1991 to 2002 Dave worked for three different firms as a designer and a project engineer. A variety of commercial and agricultural building projects took him to many states from the Midwest to the West coast. Dave has taught at Iowa State University and the University of Missouri. He has earned B.S. and M.S. degrees in Ag. Engineering from the University of Missouri, and a Ph.D. from Iowa State. Dave is married and is the proud father of five grown children.

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