



NRCS **Technology News**

April 2003

“NRCS *Technology News*” is an electronic information piece provided by Science and Technology 10 times a year. It is designed to deliver pertinent information to our customers about new technology, products, and services available from the Soil Survey and Resource Assessment and the Science and Technology deputy areas.

“NRCS *Technology News*” is in a format that is available to all NRCS field staff. Back issues of “NRCS *Technology News*” are available at the Science and Technology Consortium Web page at <http://www.nrcs.usda.gov/technical/SandT/index.html> – select NRCS Technology News from the menu at the top of the page.

Features in this issue include:

MESSAGE FROM THE DEPUTY CHIEFS

[Lawrence E. Clark and Maurice J. Mausbach](#)

CONSERVATIONIST’S CORNER

[Lillian V. Woods, State Conservationist, West Virginia](#)

NEW PRODUCTS AND SERVICES

- [#1 Stream Design Handbook in Development](#)
- [#2 National Biology Handbook in Review Stage](#)
- [#3 "Land of Life" Released on DVD](#)
- [#4 2002 Farm Bill Guide Available on Web Site](#)
- [#5 "Plant Solutions" Newsletter Now Available](#)

TECHNOLOGICAL ADVANCES

[#6 Workshop Highlights Guidelines for Bottomland Hardwood Management/WRP Compatible Use](#)

WEB-BASED TECHNOLOGY

[#7 Soil Survey Characterization Database to be Online](#)

TRAINING

[#8 "The Leader in You" Spring Seminars Approaching](#)

[#9 "Understanding the Landscape" Video Training Rollout](#)

MESSAGE FROM THE DEPUTY CHIEFS

Lawrence E. Clark and Maurice J. Mausbach

"There are profound national and global transitions that are not only altering our lives but also shaping those of our children and grandchildren."

Daryl R. Conner, Managing at the Speed of Change

It has been said that the only constant is change. Perhaps the tragic September 11, 2001, terrorist event has had the most drastic and long-lasting impact of change for all of us. However, not all change is related to tragic events. The Farm Security and Rural Investment Act of 2002 ("2002 Farm Bill") is having a favorable impact on our Agency and potentially on the environment. Never in the history of the Agency have we had such a large increase in funding for farm programs.

With this positive farm bill, however, comes change to the Agency's ability to implement the new programs. For example, the Technical Service Provider provisions will change the competitive landscape and provide expanded opportunities for our customers while changing the way we traditionally do our work. Another requirement that is impacting us is the competitive sourcing and strategic management of human capital priorities on the President's Management Agenda. With these changes come opportunities, and it is crucial that we identify these opportunities and make the most of them.

Compounding the internal changes in our Agency, external issues such as the changes in the geopolitical situation, the Nation at war, and the uncertainty of the stock market are impacting our personal lives. Thus in addition to changes at work, we have the changes impacting our Nation, homes, and personal finances. As a result, many of us may be retiring later rather than sooner. Although these changes seem rapid and sometimes difficult, it is helpful to understand the stages of change so that we can effectively embrace change and take advantage of opportunities that come with it.

According to William Bridges, author of "Managing Transitions: Making the Most of Change" (1) and "Transitions: Making Sense of Life's Changes" (2) there are three stages to change: endings, neutral zones, and beginnings. Understanding these stages can make changes and transitions easier for employees, partners, and customers.

The first stage, "endings," is losses that occur with change. Bridges identifies steps to allow organizations to deal with endings effectively. First, he recommends identifying

who is losing what—what is actually going to change. Then, accept the importance of the losses, and do not be surprised at "overreaction" to them. Acknowledge losses honestly and sympathetically and expect and accept the signs of grieving. An important step in the ending process is to repeatedly give people information. Do not assume that everyone knows the same information or interprets it the same way. Clarify what is over and what is not. Even if you do not know all of the details, share the information that you have. Finally, treat endings with respect. Show that the new changes are built upon the old ways, but it is the nature of endings to know what to forget and what to learn. If time is allowed for people to deal with the losses, the transition can be successfully navigated.

The “neutral zone” is the second stage. It occurs in the period in which neither the old ways nor the new ways work well. One suggestion Bridges makes is to create temporary solutions that lead to the final goal. Using transition-monitoring teams of 7 to 12 people from a wide cross-section of disciplines benefits all levels of an organization. The teams’ purpose is to facilitate communication, demonstrate that the Agency wants to know how people feel, act as a focus group to review plans before they are announced, and help drive the change. The teams can also help to counter rumors and misinformation. Use the neutral zone creatively. It is in this period that restraints on innovation are weakest, so allow and encourage experimentation. Remove the barriers for those early adapters who embraced the vision and strategies. Innovation is about experiences. The technologies, products, and processes are critical, but not the goal. (3)

“Beginnings” are the final stage in change. To implement the change successfully, make sure the beginnings are well executed and that a picture of the outcome is created and communicated. Give each person in the organization a part to play in the transition, and praise and encourage them through each step. Create short-term wins. Ensure quick successes to create energy, pride, and a feeling of achievement. Symbolize the new identity, and finally, celebrate the success. To make change stick, help people create “wave upon wave of change until the vision is a reality. Use the new employee orientation process, promotions, and the power of emotion to enhance new group norms and shared values.” (4)

Change can be difficult and a challenge to leaders at all levels of The Conservation Partnership. It requires selectively forgetting the past, managing the present, and refueling for the future. “It is a time for imagination, passion, courage, humanity, humility, intellect, and luck.” (3) Change provides leaders at all levels of the Agency a unique opportunity for learning and personal growth. It can provide an opportunity for employees to make a difference. As NRCS Chief Bruce I. Knight stated, “There are challenging times ahead for all of you. I know you have the dedication and the energy to meet these challenges.” (5)

1. Bridges, William. "Managing Transitions: Making the Most of Change." Reading, Massachusetts: Addison-Wesley Publishing Company 1993
2. Bridges, William. "Transitions: Making Sense of Life's Changes." Reading, Massachusetts: Addison-Wesley Publishing Company 1994

3. Prahalad, C.K. "Managing in Turbulent Times." "The Leader in You," June 12, 2002
4. Kotter, John P. "The Heart of Change." Boston, Massachusetts: Harvard Business School Publishing 2002
5. Knight, Bruce I. Remarks in St. Louis, Missouri, on August 27, 2002

[TO TOP](#)

CONSERVATIONIST'S CORNER

Lillian V. Woods

State Conservationist - West Virginia

The NRCS Science and Technology Institutes and Centers are a valuable resource that NRCS employees in West Virginia tap for specialized assistance.

The Water Management Center in Little Rock has provided guidance and leadership on the new challenges of the Small Watershed Rehabilitation Program. Although this is essentially a re-planning effort of an existing small watershed project, most states no longer have experienced planning staffs, so for many, it's like starting from the beginning. The Water Management Center provided a 3-day training course in Ames, Iowa, to states that were anticipating rehabilitation project work. Engineers, economists, and environmental specialists participated in an interactive training course that covered the basics of rehabilitation planning. Information from "pilot projects" in four states was used as the basis for the training.

West Virginia was one of 17 states to receive rehabilitation money for FY 2002. Two watershed impoundments are being evaluated for rehabilitation alternatives – Site 6 in the Upper Deckers Creek Watershed and Site 7a in the Brush Creek Watershed. Plans are estimated to take 1 year to complete and will include consideration of decommissioning and nonstructural alternatives.

The Water Management Center has been instrumental in serving as a clearinghouse for rehabilitation information. They have provided example plans, Internet information, and personal feedback to West Virginia staff. The expertise at the Water Management Center allows state staffs, like West Virginia's, to tap into another knowledge base and to produce better planning documents. It also facilitates consistency between states with regard to how projects should be planned. The role that the Water Management Center plays in rehabilitation planning is important.

Over the last 2 years, the Wetland Science Institute has provided the wetland plant identification course to 8 NRCS employees in West Virginia and over 50 in the East Region. The course at the U.S. Fish and Wildlife Service's facility in Shepherdstown, West Virginia, maintains our ability to identify wetlands in support of USDA programs.

Publications developed by the National Agroforestry Center are used in another educational effort in West Virginia. NRCS partnered with private industry and other government agencies to host more than 50 workshops that were attended by more than 2,000 woodland owners. At the workshops, woodland owners learned about the availability of programs, technical assistance, cost-share, and the benefits of forest management activities. Approximately 80 percent of West Virginia is covered by woodland, making conservation of this resource important to the environment and economy of this state.

TO TOP

NEW PRODUCTS AND SERVICES

#1 Stream Design Handbook in Development

A new stream design handbook, planned as National Engineering Handbook part 654, is presently under development. Numerous authors, both internal and external to the NRCS, are contributing regionally sensitive design tools. Since it will take a number of years to produce the basic content of the guide, individual stream design notes will be released periodically on selected topics.

The goal of this design guide is to consolidate new and existing tools, techniques, and resources to support the design process associated with stream restoration and rehabilitation. The proposed guide is planned as an “open-ended” document so additional methodologies can be added as they become available. Modifications will also be made to existing tools as experience in restoration brings new knowledge and insight.

The NRCS is increasingly involved in stream restoration projects. This stream design handbook will be of interest to the numerous disciplines interested in stream restoration/rehabilitation projects. These projects cover the full range of treatments from natural to structural. The goals and objectives of these stream projects typically include restoring/rehabilitating a stream to address bed and bank stability as well as habitat enhancement. While the NRCS took a leadership role in the development of the multi-agency reference "Stream Corridor Restoration: Principles, Processes, and Practices," the need for a comprehensive design handbook has been long recognized.

The production team is also soliciting broad input. If you have information to contribute, please contact Jon Fripp or Kerry M. Robinson.

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[TO TOP](#)

#2 National Biology Handbook in Review Stage

A National Biology Handbook has been developed by the Wildlife Habitat Management Institute (WHMI) with assistance from Utah State University. The consolidation of information will be valuable to anyone delivering conservation to America's landowners. The handbook, which includes sections written by WHMI staff and other NRCS and partner biologists, is expected to be popular with NRCS and others. A CD version of the handbook was also created.

Items covered in the handbook include conservation planning processes, links to technology information, technology notes, and job sheets with examples from across the country.

A draft of the handbook and CD were presented recently to NHQ for review, printing, and distribution.

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[TO TOP](#)

#3 "Land of Life" Released on DVD

The NRCS Wildlife Habitat Management Institute assisted in the cooperatively produced and newly released DVD, *Land of Life*. Using narration sparingly, this 9-minute high-definition, surround sound DVD introduces non-farmers to what America's farmers and ranchers are doing to manage fish and wildlife habitat on their working lands.

Accompanying DVD materials include landowner interviews, striking landscape scenes set to music, a series of conservation facts, and other materials. The production has received enthusiastic support from agricultural commodity organizations and wildlife groups. A companion product, the color booklet *Our Living Land*, highlights examples of successful projects led by NRCS field personnel and our partners to help landowners get conservation on America's working lands.

The DVD can be used for meetings and other technology transfer activities. It is available from state offices and WHMI, and will be distributed to each soil and water conservation district in the U.S. The booklet may be seen on the WHMI homepage <http://www.ms.nrcs.usda.gov/whmi/>.

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TO TOP

#4 2002 Farm Bill Guide Available on Web Site

The NRCS Wildlife Habitat Management Institute provided technical and financial assistance to the Wildlife Management Institute to hold facilitated workshops with producers and other landowners across the U.S. to develop a guide for the 2002 Farm Bill. The full color, 8-page brochure, *Farm Bill 2002—What's in it for you: Conservation Practices for Your Farm*, ties conservation practices to an overview of the farm bill conservation programs. A program matrix outlines eligibility requirements, type of financial assistance, and producer obligations for eight major USDA conservation programs.

Copies of the brochure have been sent to the States. Due to high demand, copies are also available on the WHMI Web site at <http://www.whmi.nrcs.usda.gov>. Additional hard copies may be back ordered by calling 1-888-LANDCARE. Other materials available on the Web site include a backgrounder, a sample news release, and answers to frequently asked questions.

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TO TOP

5 "Plant Solutions" Newsletter Now Available

The March/April 2003 issue of *Plant Solutions*, the new NRCS Plant Materials Program electronic newsletter, is now online.

The introductory issue of *Plant Solutions* focuses on using conservation plants to create wildlife habitat as part of Farm Bill programs like Wildlife Habitat Incentive Program (WHIP) and the Conservation Reserve Program (CRP). It also offers information on inter-seeding existing CRP lands for ecological diversity and an update on the invasive species listing of Russian olive in some states.

The two-page, full-color newsletter will be published six times a year. Each issue will center on a particular conservation challenge and include a brief feature story and sections called "Ask the Expert" and "Did You Know...." The newsletter also includes live Web site links for additional technical resources and e-mail links to specialists.

Plant Solutions is available for viewing and through a list-serve subscription at <http://plant-materials.nrcs.usda.gov/eNews/>.

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TO TOP

TECHNOLOGY TRANSFER

#6 Workshop Highlights Guidelines for Bottomland Hardwood Management/WRP Compatible Use

The management of bottomland hardwoods for migratory bird habitat is a Wildlife Habitat Management Institute (WHMI) and NRCS concern. Forest management on refuges in the lower Mississippi valley is a concern for the U.S. Fish and Wildlife Service (FWS). As part of the effort to address the issue of Compatible Use on Wetland Reserve (WRP) lands the WHMI, together with NRCS Wetland Science Institute and FWS, held a Compatible Use Workshop that addressed not only managing the forest to provide the

correct structure for priority bird species, but also reviewed landscape issues that need to be considered.

In addition to assessing the Compatible Use Guidelines for timber harvest, WHMI staff led the team that drafted guidelines for evaluating grazing as a compatible use on grasslands. Training for the grazing guidelines is in development.

Drafts of both of the above guideline reports now have been sent to NHQ for review, approval, and printing. Final reports will be available in hard copy and on the WHMI Web site.

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TO TOP

WEB-BASED TECHNOLOGY

#7 Soil Survey Characterization Database to be Online

A database of soil survey characterization data has been created at the National Soil Survey Center's Soil Survey Laboratory. It contains the "legacy" data from the mainframe database and the complete, verified data from the Soil Survey Laboratory — Laboratory Information Management System (SSL-LIMS) database. The database serves as a staging area for the soil data warehouse and is replicated at the NRCS Web farm in Fort Collins.

The public, using a Web browser, will be able to view and print standardized reports of characterization data from the Web farm. The public will also be able to search and download delimited text files of user selected data. Selection methods include criteria related to project, site, and pedon information (i.e., state, county, series name, taxonomic classification). A report of the soil profile descriptions associated with the characterization data will also be available at the Web site. The Web pages are 508 compliant and, therefore, are accessible to all, including those with disabilities. The database will be available from the link at URL:

http://soils.usda.gov/soil_survey/nscd/main.htm. It is anticipated that the URL, <http://vmhost.cdp.state.ne.us:96/>, will continue to be available until archiving the legacy database is completed.

The legacy mainframe database, including descriptions stored on the mainframe and Pedon Description Program databases, will be archived in several formats. The archived formats will be delimited ASCII files, Microsoft Access database, and report files. These formats will be stored on CDROM.

Future enhancements to the Web delivery system include the capability for lab project submitters to view their project's progress to completion, access to provisional data before project completion and verification, and the capability to suggest additional analyses and additions/corrections to the project's information.

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[TO TOP](#)

TRAINING

#8 "The Leader in You" Spring Seminars Approaching

"FISH! Sticks...Keeping the Vision Alive," the first seminar in "**The Leader in You**" spring series, will be broadcast on May 15, 2003, from 1:00 to 3:00 p.m. e.t. This seminar will teach viewers how to make positive changes stick within their organization. Presenter Steve Lundin, Ph.D., is a best-selling author with a rich history in business and management. His experience includes jobs as a think tank executive, national sales manager, and business school dean.

The second seminar in "**The Leader in You**" spring series, "Leading Through Influence," will be broadcast on June 3, 2003, from 1:00 to 3:00 p.m. e.t. Presenter Laree Kiely, Ph.D., will show viewers how to enhance their credibility and change people's minds, behaviors, and attitudes through influence and persuasion. Kiely is president of L. Kiely, Inc., an organizational effectiveness consulting group. She has over 25 years experience consulting, facilitating, and teaching organizational behavior around the world.

"**The Leader in You**" program, sponsored by the Social Sciences Institute (SSI) and the National Employee Development Center, is designed to support the locally led conservation aspects of the Farm Bill and the President's Management Agenda. The

National Association of State Conservation Districts, the National Association of State Conservation Agencies, National Conservation District Employees Association, and the Federal Training Network are cooperating sponsors of the program.

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TO TOP

#9 "Understanding the Landscape" Video Training Rollout

Personnel from 35 states met at the Lied Center in Lincoln, Nebraska, to rollout "*Understanding the Landscape*," the newest training course developed by the NRCS Wildlife Habitat Management Institute (WHMI) and partners. The video training course, 2 years in the making, includes a series of 12 lectures and 5 case studies that will help NRCS field staff better understand the ecological principles that need to be considered when assisting landowners with conservation planning. This course will be available on DVD in late spring, and a set will be sent to all NRCS Field Offices. "Understanding the Landscape" was developed for the National Employee Development Center under the leadership of WHMI, in partnership with the NRCS Soil Quality Institute, Colorado State University, and Oregon State University.

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TO TOP

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