



CONSERVOGRAM

The newsletter of the Soil and Water Conservation Society

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2018 International Annual Conference

Albuquerque Convention Center
Albuquerque, New Mexico
July 29 to August 1, 2018
www.swcs.org/18AC

How Can You Enhance Your Experience at the 2018 SWCS International Annual Conference?

The SWCS International Annual Conference is a prime opportunity for conservation professionals from around the world to come together to discuss successes and challenges, combat shared obstacles, and accelerate conservation efforts.

Enhance your experience by attending a pre-conference workshop and/or post-conference conservation tour. Both add-ons are an excellent opportunity for unique hands-on learning and will enrich your overall conference experience. Registration for workshops and tours may be purchased in addition to conference registration or as a stand-alone option. For more information and detailed workshop and tour descriptions, visit www.swcs.org/18AC.

Pre-Conference Workshops

Workshop #1: An Integrated Environmental, Economic, and Farm Management Decision-Making Tool: Nutrient Tracking Tool (NTT)

Sunday, July 29
1:00 PM – 5:00 PM

The Nutrient Tracking Tool (NTT) is a user-friendly, web-based model developed by Texas Institute for Applied Environmental Research (TIAER) staff in collaboration with the USDA. NTT estimates cost effective, eco-friendly land management operations and conservation practices associated with crop and animal production. Agricultural Policy/Environmental Extender (APEX), Farm-level Economic Model (FEM), and Animal Production Life Cycle Analysis Tool (APLCAT) are the models driving NTT.



Attendees of the workshop will learn how to apply APEX, FEM, and APLCAT in the NTT framework to make their own environmental, economic, and farm management decisions. Specifically, they will learn about (1) APEX, FEM, and APLCAT programs in NTT; and (2) details on how NTT works, data requirements for the models, available data with the tool, how to enter input parameters, how to run the models, and how to interpret results.

Workshop #2: Rangeland Hydrology and Erosion Model

Sunday, July 29

1:00 PM – 5:00 PM

This workshop is designed to provide attendees background on dominant hydrologic and erosion processes on rangelands, equations implemented in the Rangeland Hydrology and Erosion Model (RHEM), and how to access and interpret model predictions using examples from across the United States for different ecological and climatic conditions. Predicting soil erosion is a common practice in rangeland management for assessing the effects of management practices' impacts on sustainability and soil health. RHEM was specifically designed to address rangeland conditions for estimating runoff, erosion, and sediment delivery rates and volumes at the spatial scale of the hillslope and the temporal scale of a single rainfall event.

Workshop #3: Using Compost to Build Soils, Reduce Erosion, and Improve Soil Moisture Retention

Sunday, July 29

1:00 PM – 5:00 PM

Use of compost, a recycled product, for controlling erosion and sedimentation can reduce costs, increase effectiveness of revegetation, and promote environmental protection. Compost blankets (a layer of compost spread or blown onto a slope to a depth of 1 to 4 inches) and berms (a triangular dike of compost placed perpendicular to directed and sheet flow) have been used to reduce soil loss and improve soil moisture retention. Application of compost blankets can

stabilize slopes, and compost filter berms can filter and slow the flow of moving water in ditches.

A virtual tour with demonstrations will illustrate the effectiveness of these tools, and comparative demonstrations will be conducted of different compost properties, such as water holding capacity, organic matter content, particle size, and nutrient content.

Post-Conference Conservation Tours

Tour #1: Manzano Mountains Watershed Restoration Tour

Wednesday, August 1, 2018

7:45 AM – 5:50 PM

This tour, sponsored by the Edgewood and Claunch-Pinto Soil and Water Conservation Districts, US Forest Service, and SWCA Environmental Consultants will follow the Salt Mission Scenic Byway along the east front of the Manzano Mountains. Attendees will visit multiple sites within the Manzano Mountain watershed and observe restoration activities that highlight emergency stabilization and rehabilitation practices implemented after high severity wildfire. Representatives from the Chilili Land Grant, Cibola National Forest, and private property residents will discuss the impact of the wildfires on the local communities and how various partnerships were formed to assess and implement land treatments needed to mitigate accelerated runoff, soil erosion, and debris flows from the burned area. The tour will conclude at the Salinas Pueblo Missions National Monument-Quarai Ruins, which encompasses the archaeological remains of prehistoric Native American settlements, historic remains of a pueblo abandoned in the 1670s during the Spanish colonial period, the ruins of a 17th-century Spanish mission compound, and 19th-century Spanish ranching artifacts. The site was designated a National Historic Landmark in 1962 and was added to the Salinas Pueblo Missions National Monument in 1980. **Lunch will be provided during this tour.**



REGISTER TODAY FOR THE SWCS 2018 ANNUAL CONFERENCE



SWCS.ORG/18AC



JULY 29 - AUGUST 1, 2018
ALBUQUERQUE, NEW MEXICO

Tour #2: Tijeras Creek Remediation, Demonstration, and Education Project Tour

Wednesday, August 1, 2018
1:00 PM – 5:05 PM

This tour, sponsored by the Ciudad Soil and Water Conservation District and Solutions Inc., will visit the Tijeras Creek remediation project. Tijeras Canyon and the remediation project are located east of Albuquerque where urban runoff creates flooding, erosion, and pollution problems. The Tijeras Creek project demonstrates methods that can be used to reduce the impacts of urbanization on the streamside environment and water quality. These methods include reshaping of eroded areas, installation of swales and stilling basins, and plantings. Slower runoff velocities, enhanced site stability, water infiltration, and filtration now allows Tijeras Creek to flow cleaner again, much like it did before urbanization.

Tour #3: Acequias Tour of Agricultural Systems

Wednesday, August 1, 2018
1:00 PM – 5:45 PM

This tour, supported by the USDA Natural Resources Conservation Service, Santo Domingo Pueblo, and private landowners, will visit agricultural systems north of Albuquerque in the Rio Grande valley. Attendees will observe how acequias are used for irrigation. Acequias are historic and community-operated watercourses adopted from Spain and former Spanish colonies, and have been used in New Mexico for approximately 400 years. Farms on Santo Domingo Pueblo and along the Rio Grande will be visited to observe the maintenance, improvement, and conservation of acequias and how these historic and cultural irrigation systems are supporting conventional and organic production systems.

Upcoming Events

[Oklahoma Chapter Annual Conference](#)
Grove, Oklahoma
June 7-8, 2018

[Nebraska Chapter Annual Meeting](#)
Gering, Nebraska
June 21-23, 2018

[SWCS 73rd International Annual Conference](#)
Albuquerque, New Mexico
July 29-August 1, 2018

SWCS Goes to Washington

SWCS CEO Clare Lindahl and Special Projects Director Catherine DeLong traveled to Washington, DC, last month to re-introduce the Society to key partners, tout our network of experts and practitioners, strengthen historic partnerships, and make new connections. During the whirlwind trip they met with USDA and Natural Resources Conservation Service (NRCS) leadership including Under Secretary Bill Northey and Acting Chief (and SWCS



Meeting with Under Secretary Bill Northey. From left to right: Catherine DeLong, Bill Northey, Clare Lindahl, and Rex Martin.

member) Leonard Jordan. Clare and Catherine also met with US Environmental Protection Agency (USEPA) staff from the Office of Water and Office of Wetlands, Oceans, and Watersheds to discuss the shared interests of trainings for conservation staff and source water protection.

Bruce Knight, SWCS Board member, hosted a well-attended Meet and Greet at his offices where Clare was able to share her vision for SWCS. This event, along with a “Lunch and Learn” hosted by the SWCS National Capital Chapter, was an invaluable opportunity to introduce the Society’s new CEO and meet dozens of leaders from like-minded organizations. The National Capital Chapter also shared all the good work they’re doing, including informational and social events for their members.



Bruce Knight, SWCS Board Member, hosting a well-attended “Meet and Greet” for the Society at the Strategic Conservation Solutions Office.

Rex Martin, SWCS Board Chair, also made the trip to DC and attended meetings, including a valuable discussion with staff from the office of Senator Joni Ernst, who sits on the committee on Agriculture, Nutrition, and Forestry and committee on Environment and Public Works. Other notable discussions included meetings with the Walton Foundation and the National Fish and Wildlife Foundation about shared goals.

Many thanks to John Peterson, SWCS DC representative, for his guidance and the generosity of SWCS Board Member Bill Kuckuck, which allowed both Clare and Catherine to attend the CropLife America annual conference. Overall, it was an incredibly productive trip, and the Society is looking forward to building on the groundwork laid during this visit!

May/June JSWC Study Finds a Water-Saving Irrigation Strategy Used in Asia May Benefit US Rice Farmers

Long-term agricultural withdrawals from the Mississippi River Valley alluvial aquifer have caused groundwater levels to drop at unsustainable rates. Seventy-five percent of rice grown in the United States is irrigated through withdrawals from the aquifer, and continued depletion will result in negative environmental and economic impacts for Arkansas, Louisiana, and Mississippi farmers and communities.

Water-saving technologies and techniques, such as land leveling and multiple-inlet irrigation, have reduced water use and pumping costs for some farmers; however greater reductions are needed. Researchers at Mississippi State University tested four irrigation management strategies on six rice cultivars to determine the impacts on rice production. The study, "Water management strategies and their effects on rice grain yield and nitrogen use efficiency" was recently [published in the *Journal of Soil and Water Conservation*](#).

Four irrigation methods were assessed: continuous flood; straighthead-drain management; alternative wetting and drying (AWD); and aerobic, or rice grown in unsaturated soil. Most rice in the southern United States is conventionally grown under continuous flood conditions, in which the fields are flooded after seeding and standing water is maintained until the field is drained prior to harvest. In AWD, a practice commonly used by rice farmers in the Philippines, Vietnam, and Bangladesh, fields are flooded, then allowed to dry and flooded again. The cycle is repeated until the fields are dried for harvest. AWD can reduce water usage by up to 50%.

"Adoption of AWD in Asia was driven primarily by water shortage issues," says Mississippi State University Extension associate and lead author Lee Atwill. Smaller farm and field size in these countries made the management transition easier. "Implementation on large farms and in the United States presents some difficulty," Atwill continues. "Declining aquifer levels have [only] recently been highlighted, resulting in increased awareness of the severity. This has led to an industry led paradigm shift in how water is managed in rice production."

The authors state that US producers are reluctant to change their irrigation practices due to perceived reduction in nitrogen use efficiency and grain yield. Study data showed, however, that under AWD these attributes were unaffected.

Since the study, Atwill has seen positive strides in US adoption. "The development of AWD rice production [recommendations specific to US production] is near completion, and rapid adoption has taken place in the last few years driven by increased profitability on-farm," he says. "Our approach was to develop the system and evaluate its implications both in small plots and on-farm, and adoption rate has increased substantially through an aggressive extension approach."

R.L. Atwill II, L.J. Krutz, J.A. Bond, K.R. Reddy, J. Gore, T.W. Walker, and D.L. Harrell. 2018. Water management strategies and their effects on rice grain yield and nitrogen use efficiency. Journal of Soil and Water Conservation 73(3):257-264.

Career Profile: Martha Zwonitzer

For the third installment of SWCS Career Profiles, we had the pleasure of talking with Agronomic Research Specialist Martha Zwonitzer about how her interest in agriculture and the environment shaped her career path, as well as advice she has for students and young professionals looking to begin their careers in similar fields. View the full profile [online](#).



Martha Zwonitzer, Agronomic Research Specialist, Monsanto
Career Sector: Industry
Degrees: BS in Crop and Soil Environmental Science from University of Arkansas, MS in Environmental Science from the Department of Agriculture and Biosystems Engineering from Iowa State University, and have

completed all courses toward a PhD in Plant and Soil Science at Texas Tech.

What has your career path looked like from college until today? In my final semester at the University of Arkansas, I began working for the Natural Resources Conservation Service (NRCS) on a wetlands project. I started my master's degree at Kansas State University but got married and moved to Virginia where I worked at Virginia Tech in small grains breeding. I took some time off from my career when I had children. Following Virginia, I worked for the Samuel Roberts Nobel Foundation in Ardmore, Oklahoma, in legume breeding. We moved to Raleigh, North Carolina, and I taught high school for three years. Next, we moved to Iowa, and I managed the Water Quality Lab in the Agriculture and Biosystems Engineering Department at Iowa State University. I finished my master's degree there, working on a project centered around antibiotic resistant bacteria from swine systems, and was hired by the Iowa Soybean Association with the Environmental Programs and Services team. When we moved to Lubbock, Texas, I began working for Texas A&M University with AgriLife Research and Extension.

Finally, I took a job at Monsanto in Lubbock, where I work as an Agronomic Research Specialist. This job is exciting and I get the opportunity to work with cutting-edge technologies and with farmers every day.

If I had a choice, that is not what my career path would have looked like. Ideally, I would have found a great company or a great position and put in my 20 or 30 years. But, honestly, it took me a very long time to decide on a career. I've always wanted to be involved in agriculture and the environment, but I've never put limitations on what that looks like. Life takes you places sometimes, and you need to be agile and look for opportunities where you are located.

What advice do you have for college students or early career professionals who might want to work in a job similar to the one you have right now? Never be afraid to shake a hand and make an acquaintance. And be sure to follow up: send an email, pick up the phone, and make

sure that person remembers you. Attending SWCS meetings is critical to developing that network. Never stop learning, and always be willing to take on new challenges, even when they make you uncomfortable. Finally, take time to reflect, to see what you learned, to see how you should have responded differently, or to celebrate your successes.

“I’ve always wanted to be involved in agriculture and the environment, but I’ve never put limitations on what that looks like.”

What is the job outlook for your current position in the future? Also, what changes in required skill sets do you anticipate? I think there’s a growing demand for people who are strong in technology. But at the same time, there’s also just as strong a demand for people who understand basic agronomics and how both of those impact each other. Sometimes we get weighed down by the path of technology and forget that you must know the basics of how to grow a crop and grow it sustainably. We have to be able to produce food, fuel, and fiber more quickly—and we have to do that without sacrificing our quality of life and our resources. As far as required skill sets, you’ve got to be agile. You’ve got to be able to learn quickly, but you must support that learning with a strong foundation in the sciences.

3rd Annual SWCS Photo Contest

The 3rd Annual SWCS Photo Contest is in full swing! We invite you to submit photos that showcase the value and beauty of our natural resources and inspire viewers to act as responsible stewards of the land. We want to see what conservation looks like to you. Submit up to three photos for a chance to win some great prizes. Your photo may even be chosen to be put on display at the SWCS Annual Conference this summer! For more information on how to enter, visit www.swcs.org/18photocontest. Contest ends June 13, so submit your photos today!



News from DC

Courtesy of SWCS DC Representative John Peterson

- House Agriculture Chairman Mike Conaway [races](#) to get enough votes to pass the farm bill before the House brings it up for debate.
- House Speaker Paul Ryan [says](#) an agreement on the North American Free Trade Agreement (NAFTA) must be reached by May 17 for Congress to vote on it this year.
- US Secretary of Agriculture Sonny Perdue will be touring New Mexico, Colorado, Wyoming, and Nebraska starting Monday, May 14. His schedule can be found [here](#).
- Wisconsin Attorney General Brad Schimel [paved the way](#) for farmers who grow industrial hemp to produce cannabidiol, or CBD, oil.
- Vermont is the latest state to [join](#) a 31-state quarantine to prevent the spread of emerald ash borer.
- Senators John Hoeven and Tom Udall [this week](#) introduced bipartisan legislation to support tribal self-governance, agricultural production in Indian Country, and enhanced agribusiness and rural development opportunities for Native American farmers, ranchers, and communities.
- Nearly 31 million acres of farmland were irreversibly [lost](#) to development between 1992 and 2012, according to a report released by the American Farmland Trust.
- A House subcommittee advanced a spending bill for fiscal year 2019 that would increase funding for the Army Corps of Engineers and [repeal](#) the “waters of the US” rule, bypassing the administrative process.
- President Donald Trump has named Mississippi State University President [Mark E. Keenum](#) as chairman of the Board for International Food and Agriculture Development.
- [Chesapeake Bay](#) agriculture conservation programs await details of pending Farm Bill
- [The Next Generation in Agriculture Act](#) was introduced on April 26, 2018, by Senators Heidi Heitkamp and Susan Collins, to address the nation’s shortage of farmers and ranchers by connecting retiring and aspiring producers and helping to facilitate the transfer of knowledge, skills, and resources.
- US agriculture subsidies have distorted markets, promoted risky planting decisions, and supported corporate welfare at the expense of taxpayers, consumers, and the environment, says nonpartisan budget watchdog [Taxpayers for Common Sense](#).

New Members

Welcome members who joined in April!

Alabama

Abigail Lane
Phillip Voss

Colorado

Neil Havermale

DC—National Capital Chapter

Sally Flis
Kelly Novak

Georgia

Amelia Dortch

Iowa

Alam Ramirez

Illinois

Laura Gentry
Lowell Gentry
Emerson Nafziger
Megan O'Loughlin
Trevor Sample
Nicholas Seiter
Steve Stierwalt

North Dakota

Cheryl Wachenheim

Nebraska

Bijesh Maharjan
Jacob Rix

New Mexico

Kevin Branum
Richard Strait

New York—Empire State

Tracy Eisele

Oregon

Larisa Lamere

Pennsylvania—Keystone

Judy Mohn

Texas—East Texas

Lily Serach

Wisconsin

Katie Abbott
David Grusznski

Corporate Members

Please contact corporate.info@swcs.org for more details.

Gold



Silver



Bronze

