SOIL AND WATER CONSERVATION SOCIETY

RESILIENT LANDSCAPES

Planning for Flood, Drought & Fire

68th International Annual Conference

Reno, NV July 21-24, 2013

2013 Annual Conference Program

68th SWCS International Annual Conference Final Program

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Conference Schedule in Brief

Sunday, July 21, 2013

9:30 AM	JSWC Editorial Board	Tuscany 5
11:00 AM	Registration Opens	Registration Desk
12:00 PM	House of Delegates, State of Society Address, and Regional Roundtable Meetings	Tuscany 10/11
1:00 PM	*Social Indicators in Watershed Management Projects Workshop	Tuscany 1
1:30 PM	*Nitrogen Tools Workshop	Tuscany 3
2:00 PM	Leadership Practices in Today's Dynamic World	Tuscany 2
4:00 PM	Berg and Society Fellows Forum	Tuscany 10/11
6:00 PM	New Members/First Timers Orientation	Tuscany 9
6:30 PM	Welcome Reception	Tuscany 5/6

Monday, July 22, 2013

7:30 AM	Registration Opens	Registration Desk
7:30 AM	Professional Development Committee Meeting	Tuscany 7
8:30 AM	Opening Plenary and Pritchard Lecture	Tuscany 11/12
10:00 AM	Morning Break: Exhibit Hall and Poster Presentations Open	Tuscany D/E/F
10:30 AM	Concurrent Sessions	See Page 25
10:30 AM	NIFA Special Symposium	Tuscany 9 and 11/12
12:00 PM	Lunch Break	On your own
12:00 PM	*ARCSE Lunch and Annual Business Meeting	Oceano Restaurant
1:30 PM	Concurrent Sessions	See Page 26
3:00 PM	ARCSE Board Meeting	Oceano Restaurant
3:00 PM	Afternoon Break	Tuscany D/E/F
3:30 PM	Concurrent Sessions	See Page 27
5:00 PM	Poster and Exhibitor Reception in Exhibit Hall	Tuscany D/E/F
7:00 PM	Silent Auction Ends	Tuscany D/E/F
7:00 PM	NIFA Grants Workshop	Tuscany 9

Tuesday, July 23, 2013

7:30 AM	Registration Opens	Registration Desk
8:00 AM	Tuesday Plenary	Tuscany 11/12
10:00 AM	Morning Break in Exhibit Hall	Tuscany D/E/F
10:30 AM	Concurrent Sessions	See Page 34
12:00 PM	*Awards Luncheon	Tuscany 10
12:00 PM	Lunch Break	On your own
1:30 PM	Concurrent Sessions	See Page 35
3:30 PM	Concurrent Sessions	See Page 36
5:15 PM	SWCS Annual Conference Program Committee	Tuscany 10

Wednesday, July 24, 2013

7:00 AM	*Tour #1 – Perrazzo Watershed and US Forest Service Aspen/Forest Restoration Projects Tour	Valet Parking Area
7:00 AM	*Tour #2 – Mount Rose Summit Snow Survey, Lake Tahoe Conservation District and Forestry Restoration Tour	Valet Parking Area
8:00 AM	*Tour #3 – Eagles and Agriculture Program	Valet Parking Area

*Not included in standard registrations. Additional cost and ticket(s) required to attend.

Program Committee Chair Welcome

Welcome to the 68th Annual Conference of the Soil and Water Conservation Society. This year, we focus on the need for resilience across all landscapes in the face of variable stresses on our environment from flood, to drought, to fire. As I write this address on a spring morning, I am thinking of the headline in my local newspaper today, which stated that we are at record low soil moisture. Last week, from a high vantage point near the headwaters of the mighty Missouri River, I could see dust plumes blowing across our fertile valley. This is quite a contrast at a time of year that is usually affectionately known as "mud season." Two years ago, we came into spring with a record snow pack and then experienced a fairly quick melt. Catastrophic flooding ensued throughout the Missouri Basin. In the interim year, much of the West suffered a severe fire season. Over that term, floods, fires, droughts, and storms also severely impacted regions across North America and the world. I cannot think of a more appropriate entity than the SWCS to support the effort it will take to build consensus, propose solutions to these issues, and implement them. The gathering of minds, here this week, represents a great hope for the future.

We present to you an excellent program. I would like to thank all of the presenters, volunteer planners, and SWCS staff who brought this opportunity to fruition. I believe the greatest strength of SWCS is its multidisciplinary culture, supported by all of you. This is strongly reflected in this year's program; the collaboration of diverse expertise is paramount in addressing our conference theme, ongoing topics of interest within the Society, and the implementation of conservation. In addition to diverse technical knowledge, SWCS brings multiple perspectives to bear on these issues. We are conservation practitioners, advisors, educators, researchers, and policy influencers. We are farmers, ranchers, land managers, watershed and forest stewards, and keepers of the soil. We are change agents for the good of society.

The planning of this year's conference has engaged many new conservation professionals. We bid a bittersweet farewell to Dewayne Johnson who tirelessly served SWCS and this conference for many years. However, we also welcomed Kim Johnson-Smith to the Society staff. Kim brings a wealth of experience and expertise to the table, and I am sure that everyone will recognize her diligent, high-quality work for years to come. I am attempting to do justice to past planners as I take on the role of chair for the first time. The entire program planning committee, including our enthusiastic hosts of the California/Nevada Chapter, has dedicated their collective time and expertise in developing an excellent slate of presentations, symposia, workshops, and tours. Last, but not least, our attendees and speakers round out the team that makes the 68th Annual Conference of the Soil and Water Conservation Society a benchmark forum to study and promote conservation across all landscapes.

With sincerest regards,

Tommy Bass
2013-2015 Program Planning Chair
Montana State University Extension

California-Nevada Chapter Welcome

We'd like to take this opportunity to thank you for attending the conference and letting us share with you some information about the Silver State.

Nevada became the 36th state on October 31, 1864, during the height of the Civil War, which gave rise to the State's motto, "Battle Born." The state capital, located 25 miles South of Reno, in Carson City, is home to the only silver-domed state capitol building in the country, in recognition of the value of the Comstock Lode mined in Virginia City during the 1850s.

At 110,600 square miles, Nevada is the seventh largest state and includes the bulk of the Great Basin (high desert) geographic province, while the southern portion of the state is part of the Mojave Desert (low desert) geographic province.

Reno, the state's second largest city at about 500,000 residents, is located at 4,500 feet above sea level and provides an ideal year-round climate for outdoor adventure. To the west of city, the prominent peak is Mt. Rose, which with a summit elevation of 10,776 feet, rises over 6,000 feet above the valley floor. Given the location on the eastern edge of the Sierra Nevada, Reno is a jump-off point for world-class hiking, camping, skiing, and cycling opportunities. The city, situated on the Truckee River, also created the first urban white-water kayaking park in the nation and hosts an international competition each spring. The region also boasts several world-class golf courses, and, of course, all that open space helps to round out the recreational experience that is a key component to the quality of life in Reno.

In spite of being the driest state in the nation (average rainfall is about eight inches), Lake Tahoe is nearby and offers recreational opportunities to visitors and residents alike to enjoy the sapphire blue waters in one of the most unique alpine settings in the United States.

While tourism is a major contributer to the state's economy, mining and agriculture round out the top three industries. Nevada presently leads the nation in gold production, much of it from mines east of Reno. Additionally, silver, copper, gypsum, and other industrial minerals are extracted throughout the state. Agriculture contributes significantly to the state's economy, at some $500,000,000 in 2007. Major crops include alfalfa, corn, small grains, onions, potatoes, and garlic, where the dry climate inhibits the development of molds, smuts, and fungus. Livestock production also plays a large role in the agricultural community, with more than half of the 3,200 farms and ranches raising cattle on improved pasture and on rangeland, much of which is managed under lease from the Bureau of Land Management and the US Forest Service.

Whether you seek the quiet solitude of a mountain forest beside a gurgling stream, the high-stakes action in one of the casinos, or a remote off-road adventure with family, Reno and northern Nevada can offer it all.

Thanks again for attending the conference, and welcome to Reno!

If you have any questions or need assistance, please ask any of the California/Nevada volunteers, and they will be happy to assist.

Conference Volunteers

Please join the SWCS Board of Directors and the Annual Conference Program Committee in thanking these volunteers and many others for all of their contributions and work in preparing for and delivering a great event!

Concurrent Session Moderators, Tour Leaders, and AV Tech Support Volunteers

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- Augustine (Austin) Avwunudiogba
- Shelly Lassiter
- Zahangir Kabir
- Cathy McGuire
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- Phil Hogan
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- Rob Roy
- Bob Knight
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Opening Welcome Reception

Sunday, July 21, 6:30 - 8:30 p.m.

30th Anniversary

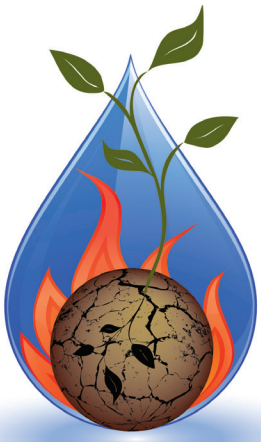
1982 2012

Conference Registration and Facility Information

The Soil and Water Conservation Society registration desk is located on the 2nd floor, outside the Tuscany Ballroom. SWCS staff members will be on site to assist you.

Registration Hours:

Sunday 11:00 a.m. — 6:30 p.m.
Monday 7:30 a.m. — 5:30 p.m.
Tuesday 7:30 a.m. — 3:30 p.m.



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SOIL AND WATER CONSERVATION SOCIETY

Tickets and Passes

The conference registration fee covers one participant. Formal name badges are not provided for guests. Additional tickets for guests to attend the Welcome Reception on Sunday evening, the Exhibit and Poster Reception on Monday evening, educational tours, or the Awards Lunch may be purchased at the registration desk and are subject to availability.

Admission to educational sessions (including the plenary sessions), exhibits, posters, and special events is by formal name badge or ticket. Your name badge should be worn at all times during the conference. For your safety, do not wear your name badge outside the conference area.

All registered attendees will receive a registration packet, which contains a formal name badge and tickets for purchased events. Tickets will be collected for all ticketed events.

Please Note: No refunds will be given for conference registrations, workshops, tours, meal functions, or activities. Registration personnel will not exchange tickets. SWCS reserves the right to cancel events/activities without prior notice.

Lost and Found

Check with the Peppermill registration desk or at the SWCS registration desk.

Medical Services

For medical emergencies, dial “0” from any house phone or room phone.

Messages

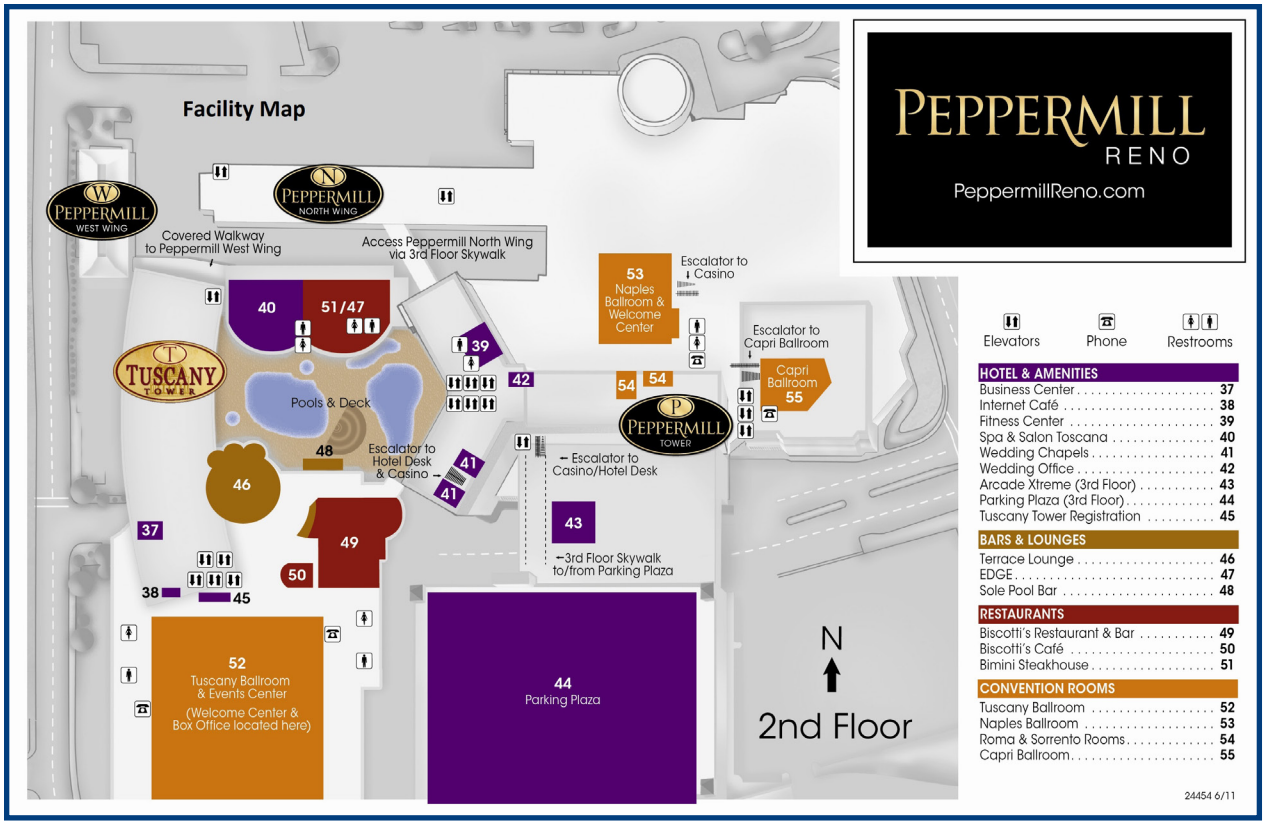
A message board is located near registration. To preserve the educational quality of the conference, meetings will not be interrupted for personal announcements or messages.

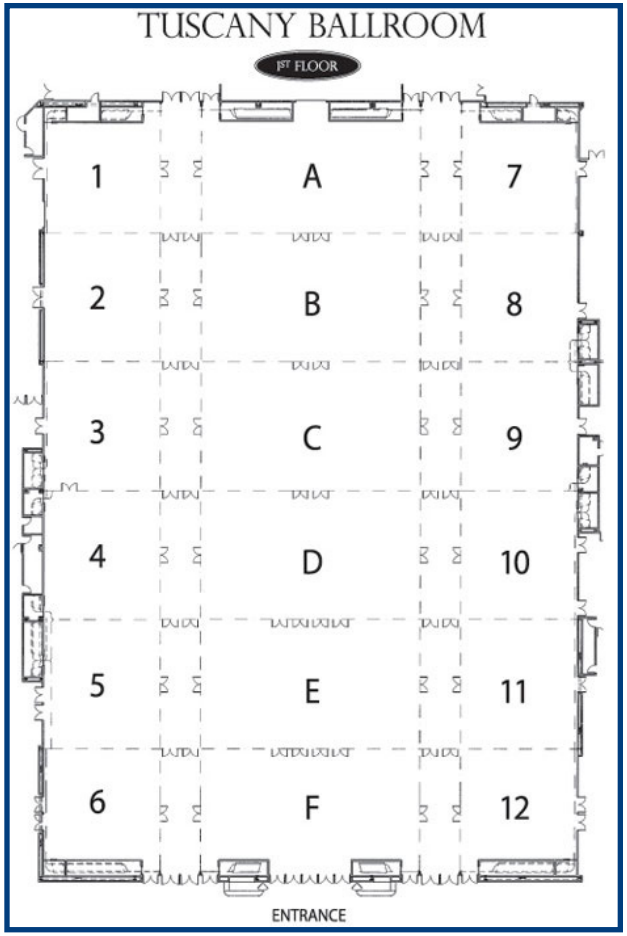
CEUs

SWCS has worked to secure continuing education credits from various certifying organizations. Certified, licensed, or professional engineers (PE), agronomists (CPAg), soil scientists and classifiers (CPSS and CPSC), crop advisors (CCA), crop consultants (CPCC), foresters, range managers (CPRM), grassland professionals (CGP), professionals in erosion and sediment control (CPESC) and storm water quality (CPSWQ), and other professional conservationists may be able to obtain continuing education credits.

Please pick up a CEU tracking/sign in sheet at the registration desk and have each room moderator sign the sheet as appropriate. Return the form to registration at the end of the conference, and we can submit it on your behalf.

Facility Map - Peppermill Reno





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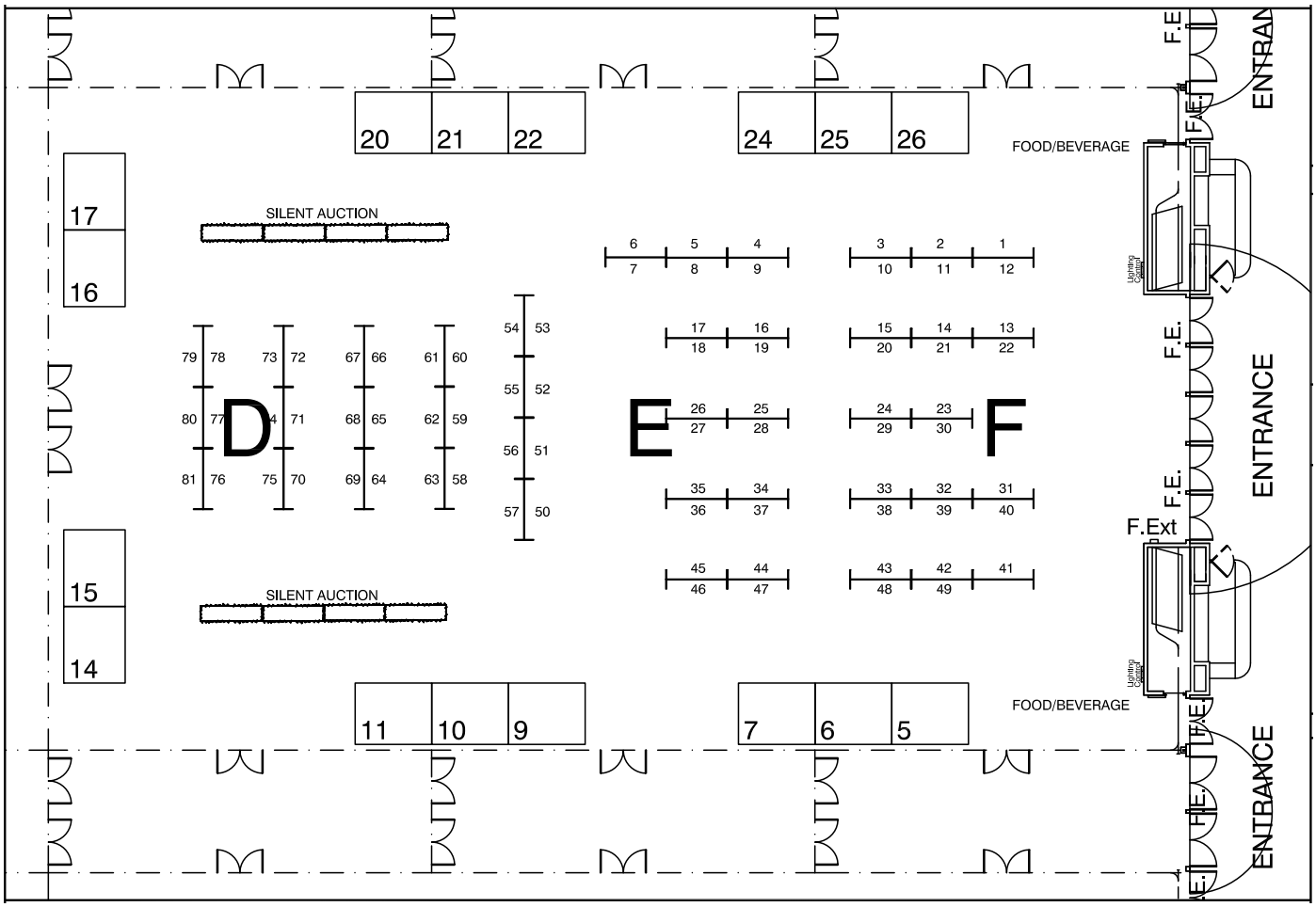
The Nature Conservancy
www.nature.org

Validus Ventures LLC
www.validusservices.com

White River Irrigation District

Conference Exhibitors

Booth	Exhibitor	Contacts/Representatives
5	Agri Drain Corporation	Charlier Schafer and Lisa Newby
6	Nevada Dept. of Agriculture and Nevada Farm Bureau Federation	Jim Barbee and Doug Busselman
7	Sustainable Agriculture Research and Education (SARE)	Sean McGovern
9	National Center for Appropriate Technology (NCAT)	Rex Dufour
10	Sand County Foundation	Joseph Britt and Karen Sweet
11	American Farmland Trust	Jeremy Peters and Michael Baise
14	USDA-ARS Great Basin Rangelands Research Unit	Arnold King and Leonard Jolley
15	Drake Agricultural Law Center	Edward Cox
16	DriWater	Joseph Paternoster and Ruth Paternoster
17	Sustainable Rangelands Roundtable and University of Wyoming Department of Ecosystem Science and Management	Kristie Maczko and John Tanaka
20	Conservation Professional Training Program - University of Wisconsin Extension	John Kriva and Ingrid West
21	Truax Company Inc.	Dwayne Breyer and Mary Kay Breyer
22	USDA-NRCS	Patti Novak-Echenique and Matt Cole
24	The Fertilizer Institute	Laura Kubitz and Wade Foster
25	Agren Inc.	Stan Buman
26	EnviroCert International Inc.	David Ward and Glenda Carmney



Poster Presentations

Adaptive Management of Conservation Efforts

1. Facilitating Perennial Grass Establishment using Herbicide to Control Cheatgrass and Promote Resilient Landscapes
   Charlie Clements, USDA ARS
2. Windbreaks and Waterbreaks: Putting the Brakes on Extreme Weather Impacts on Ag Lands
   Gary Bentrup, U.S. Forest Service
3. Nutrient and Water Management: Their Important Relationship and Challenges to Implementation
   Dennis Chessman, USDA NRCS

Agricultural and Conservation Economics

4. Economic Performance of a Corn Belt Grass Farm
   David Archer, USDA ARS NGPRL

Biodiversity Conservation and Management

5. Effects of Climate Change and Agricultural Intensification on Ecosystem Services in Riparian Areas and Streams in Eastern Oregon
   David Wooster, Oregon State University
6. Thoughts of Soil and Water Conservation Design for Tourism Highway in Mountain Area Based on the Landscape Function
   Zongwei Chen, CATS

Conservation Models, Tools, and Technologies

7. Agronomic Water Use Efficiency of Fresh Market Tomatoes Exposed to Elevated Carbon Dioxide
   Dave Goorahoo, CSU Fresno
8. Improving Watershed Resiliency through a New Rural Stormwater Management Model in a Rural Area Along Lake Huron
   Tom Prout, Ausabel Bayfield Conservation
9. The Wall - GTC Hatch to Bonaire TL #7
   Susan Avent, Georgia Transmission Corporation
10. Operationalizing Tillage Mapping Technologies
    Nathan Torbick, AGS
11. Validation of DNDC Model for Estimation of Nitrous Oxide Emissions from Agricultural Soils
    Navreet Kaur Mahal, CSU Fresno
12. Airjection Irrigation as a Management Strategy for Optimizing Water Use Efficiency and Improving Soil Quality
    Dave Goorahoo, CSU-Fresno

Outreach, Education, and Community Engagement

13. Reducing Bacteria with Best Management Practices for Livestock: Development of the Lone Star Healthy Streams Program
    Jennifer Peterson, Texas A&M AgriLife Extension

Soil Resource Assessment and Management

14. Biogeochemistry of a Soil Catena in the Eastern Sierra Nevada Range, NV
    Robert Blank, USDA ARS
15. Assessment of Soil Sediments and Salinity Status of Wetland Landscape Affected by Climate Change in South-Western Nigeria
    Joseph Aruleba, Ekiti State University
16. Biogeochemistry of Hydrothermally and Adjacent Non-Altered Soils
    Robert Blank, USDA ARS
17. Nitrogen Slow-Release and Stabilizer Products for Grain Sorghum Production
    Mark McFarland, Texas A&M AgriLife Extension
18. Assessment and Management of a Degraded Utilisol for Fruit Crops Production in South Southern Nigeria
    Omoyeni Opeyemi, Ekiti State University
19. Using Rare Earth Elements (REE) to Determine Wind-Driven Soil Dispersion from a Point Source
    R. Scott Van Pelt, USDA ARS
20. Incorporating Water Repellent Soils into Post Fire Erosion Predictions - A Case Study
    Nathan Gardiner, Texas A&M University
21. Soil Carbon and Nitrogen Dynamics after Six Years of Cover Crop Use
    Francisco Arriaga, University of Wisconsin-Madison

Water Resource Assessment and Management

22. Optimizing Water Use Efficiency of Tomato under Subsurface Irrigation with ET model
    Touyee Thao, CSU-Fresno
23. Community Education for Watershed Management 36
    Sydonia Manibusan, University of Guam
24. The Tribal Approach to Understanding Non-Point Source Pollution in Nevada
    Olin Anderson, Pyramid Lake Paiute Tribe
25. Denitrification in Manure Impacted Riparian Buffers of the South Atlantic Coastal Plain
    Patrick Hunt, USDA ARS
26. Effects of Tillage Practices on Annual Runoff and Phosphorus Export through Drainage Tiles and Surface Runoff in Ontario, Canada
    Merrin Macrae, University of Waterloo
27. The National Water Quality Initiative
    Erika Larsen, USEPA
28. The Implementation of the New Kentucky Nitrogen and Phosphorus Index to Reduce Agricultural Nonpoint Source Pollution
    Tibor Horvath, USDA NRCS
29. What Happens When Snow Melts? Winter Phosphorus Export from Cropland in Southwest Wisconsin
    Randy Mentz, University of Wisconsin-Platteville

Conservation Innovation Grant (CIG) Related Project

30. Mapping Rice Paddy and Winter Waterfowl Hydroperiod in the USA with Multiscale Satellite Imagery
    Nathan Torbick, AGS
31. Demonstration of Winter Cover Crops and Evaluation of their Environmental Effectiveness on Improving Water Quality on a Working Demonstration Farm in the Mackinaw River Watershed, Illinois
    Krista Kirkham, The Nature Conservancy
32. Integrating Soil, Crop and Pest Monitoring Using Spatial Technology on Arkansas Cotton Farms to Achieve Nutrient Loss Reduction
    Tina Gray Teague, Arkansas State University
33. Affordable Edge-of-Field Monitoring: A Three-State Project to Promote and Evaluate a Simple, Inexpensive, and Reliable Gauge
    Ben Brown, University of Wisconsin-Platteville

Adaptive and Mitigation Planning for Drought

34. Effects of Corn Stover Removal on Yields in a Notill Management System
    Gary Varvel, USDA ARS
35. Drought Survival and Perennial Grass Success in the Face of Cheatgrass Invasion: Germination, Emergence, Seedling Die-off and Reproduction
    Dan Harmon, USDA ARS
36. International Cooperation for Climate Change Mitigation and Adaptation Using Conservation Agriculture in North America
    Jorge Delgado, USDA ARS
37. Membrane Installation Approaches for Increasing Soil Water Holding Capacity in Highly Permeable Soils
    Alvin Smucker, Michigan State University
38. Nitrous Oxide Emissions from Winter Wheat during Drought
    Tracy Wilson, Oklahoma State University
39. Identification of Hydrologic Drought Triggers from Hydro-climatic Predictor Variables
    Meenu Ramadas, Purdue University

Invasive Plant Species

40. An Integrated Weed Management Approach to Saltcedar Control: Controversies and the Definition of Success
    Charlie Clements, USDA ARS
41. Influence of Bromus tectorum Invasion on Soil Properties in Northern Nevada
    Robert Blank, USDA ARS
42. Forecasting Bromus Tectorum and Fire Threat: Site Soil Type versus Population Traits
    Dan Harmon, USDA ARS

Rangeland Conservation and Grazinglands CEAP

43. Evaluating Conservation Practices and Plant Material on Cheatgrass Invaded Landscapes: A 10 Year Case Study
    Charlie Clements, USDA ARS

44. Chemistry of Through-fall and Stem-flow Leachate Following Rainfall Simulation over Pinyon and Juniper
    Robert Blank, USDA ARS
45. Effectiveness of Conservation Management for Decreasing Soil Loss in Runoff from Cattle Pastures
    Daniel Pote, USDA ARS
46. Comparison of a Multi Cone vs. Single Cone Penetrometer as Tools to Assess Grazing Compaction
    Alex Cumbie, Oklahoma State University
47. Assessing the Effectiveness of Conservation Practices on a Working Ranch in Southeastern Arizona using the Rangeland Hydrology Erosion Model (RHEM)
    Morgan Ross, University of Arizona
48. Spatial Scale of Drought in a Meso-Scale Southwestern Watershed
    Haiyan Wei, University of Arizona

Water Resources Research, Education, and Outreach (NIFA Land Grant/Sea Grant 406 and NRI)

49. Advancing the Adoption and Strategic Placement of Artificial Nitrogen Sinks
    Aruthur Gold, University of Rhode Island
50. Hydrologic Simulation of Drought in the Upper Colorado River Basin
    Clyde Munster, Texas A&M University
51. Stormwater Management Education in Nebraska: Integrating Extension, Teaching, and Research
    David Shelton, University of Nebraska
52. Factors Affecting Adoption of Nutrient Management Practices by Farmers and Homeowners
    Laura McCann, University of Missouri
53. Soil Water Repellency, Water Flux and Water Content in Soil of Three Ecosystems in the Lower Wisconsin River Valley
    Birl Lowery, University of Wisconsin-Madison
54. Good farmers in the U.S. Cornbelt
    Jean McGuire, Iowa State University
55. Watershed Diagnostics for Improved Adoption Of Management Practices: Integrating Biophysical And Social Factors
    Paul Leisnham, University of Maryland
56. Water Quality Performance of Wetlands Receiving Nonpoint Source Loads: Nitrate Removal Efficiency and Mass Load Reductions Using Targeted Wetland Restorations
    William Crumpton, Iowa State University
57. Potential Impact of Targeted Wetland Restoration on Nitrate Loads to Mississippi River Subbasins: Performance Forecast Modeling of Loads and Load Reductions
    William Crumpton, Iowa State University
58. Monitoring of On-Farm Water Storage Systems in Porter Bayou Watershed, Mississippi
    Joel Paz, Mississippi State University
59. Long-Term Agro-ecosystem Research in the Upper Mississippi River Basin
    Dennis Busch, UW-Platteville
60. Showing (Stream) Signs of Concern
    Tom Buman, Agren
61. Social Capacity, Landscape-level Conservation and the Demonstration Watershed Approach: Case Studies in the Upper-Midwestern United States,
    Nicholas Babin, Purdue University
62. Water Quality and Ecosystem Services from Landscape Best Management Practices that Enhance Vegetation in Urbanizing Watersheds
    Jules Bruck, University of Delaware
63. Online Tool to Help Farmers Reduce Phosphorus and Sediment Loading in Owasco Lake, New York
    J Archibald, Cornell University
64. Water Sustainability in Desert Agriculture: Enhancing Relationships and Global Competency of Graduate Students and Faculty through Collaboration with Israel
    Sharon Walker, UC Riverside
65. A Management Tool for Small Community Onsite Wastewater Treatment Systems: The Community System Owner's Guide
    Sara Heger, University of Minnesota
66. Developing Tools to Attenuate Emerging Contaminants in Onsite Wastewater Treatment Systems: Project Update
    Gurpal Toor, University of Florida
67. The Great Lakes Regional Water Program: Impacts and Next Steps
    Rebecca Power, University of Wisconsin Extension

68. Analysis of Conservation Practice Effectiveness and Producer Adoption Behavior in the Lake Jordan Watershed (North Carolina)
    Deanna Osmond, North Carolina State University
69. Urban Forestry: Using I TREE at Kent State University – Service Learning Course 2012
    Dave Ward, Envirocert
70. Analysis of Endocrine Disrupting Compound Uptake in Fruit and Vegetables
    Patrick Wilson, University of Florida/IFAS
71. An Integrated Approach to Precision Conservation Planning In The South Fork Watershed
    Jon Witter, Ohio State University
72. An Integrated Approach to Foster Science-Based Management Of Agricultural Drainage Channels In The Western Lake Erie Basin
    Jon Witter, Ohio State University
73. Study of the Uptake of PPCPs into Greenhouse Vegetables Grown Under Moisture Stress Conditions
    Philip Moravick, University of Hawaii at Manoa
74. Microbial and Nitrogen Loads in Streams of Urbanizing Watersheds Impacted by Varying Densities of On-site Wastewater Treatment Systems
    Mussie Habteselassie, University of Georgia
75. Prototype Mobile Irrigation Water Management System on eRAMS/CSIP
    Allan Andales, Colorado State University
76. Improving Understanding of Ephemeral Gully Sediment and Nutrient Sources on Cultivated Fields
    Aleksey Sheshukov, Kansas State University
77. Smart Irrigation: Smartphone technology for Managing Urban and Agricultural Irrigation
    Kelly Morgan, University of Florida
78. Water Quality Best Management Practices in the Judith River Watershed
    Stephanie Ewing, Montana State University
79. AFRI Project, Year 3: Implementation of a High-Resolution Drought Monitoring Product
    Brent McRoberts, Texas A&M University
80. An Integrated Approach to Precision Conservation Planning in the South Fork Watershed
    Richard Cruse, Iowa Water Center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Sunday, July 21 Schedule and Event Descriptions

9:30 AM	JSWC Editorial Board	Tuscany 5
11:00 AM	Registration Opens	Registration Desk
12:00 PM	House of Delegates, State of Society Address, and Regional Roundtable Meetings	Tuscany 10/11
1:00 PM	*Social Indicators in Watershed Management Projects Workshop	Tuscany 1
1:30 PM	*Nitrogen Tools Workshop	Tuscany 3
2:00 PM	Leadership Practices in Today's Dynamic World	Tuscany 2
4:00 PM	Berg and Society Fellows Forum	Tuscany 10/11
6:00 PM	New Members/First Timers Orientation	Tuscany 9
6:30 PM	Welcome Reception	Tuscany 5/6

*Not included in standard registrations. Additional cost and ticket(s) required to attend.

State of the Society, House of Delegates, and Regional Roundtable Meetings

Sunday, July 21, 12:00 – 2:00 p.m.
Tuscany 10/11

The annual SWCS State of the Society meeting will include President Dan Towery's State of the Society address, the Annual Report from Executive Director Jim Gulliford, the House of Delegates session, and the regional meetings. The regional meetings will provide conference attendees an opportunity to meet with others from their region for a roundtable discussion on local events and issues. This two-hour session is open to all conference attendees.

New Members/First Timers Orientation

Sunday, July 21, 6:00 – 6:30 p.m.
Tuscany 9

If you are a new member or are attending the Soil and Water Conservation Society annual conference for the first time, be sure to attend this orientation. This is a great opportunity to meet others and discuss the conference with a few "experienced" board members and others about sessions, schedules, symposia, and networking opportunities. Many thanks to Bill Boyer, Northeastern Region Director, for organizing this session.

Opening Welcome Reception

Sunday, July 21, 6:30 – 8:30 p.m.
Tuscany 5/6

This conference kick-off event is a great opportunity to network with your colleagues and meet the newest members of the SWCS. The reception will be hosted by our Diamond Sponsor, Certified Professional in Erosion and Sediment Control (CPESC), who will be celebrating their 30th Anniversary. Light hors d'oeuvres will be served along with a cash bar. A ticket for this event is included with full conference registration. Additional tickets may be purchased for guests at the registration table.

Using Social Indicators in Watershed Management Workshop

Sunday, July 21, 1:00 – 5:00 p.m.
Tuscany 1

Instructors/Presenters:

Nicholas Babin, Purdue University; Joe Bonnell, The Ohio State University; and Ken Genskow, UW-Madison Department of Urban and Regional Planning

Objectives:

At the end of this session, participants will be able to describe the human dimensions of natural resource management, understand some basic concepts of behavior change, and have the tools to use social indicators in nonpoint source management work.

Background:

Working with land owners and managers to find effective and practical solutions to water quality problems is crucial to achieving environmental goals. Social indicators provide information about the social context, awareness, attitudes, capacities, constraints, and behaviors in a watershed or project area. Using social indicators can help resource managers and conservation professionals understand and target audiences, select effective interventions, and evaluate their impacts.

Planned Activities:

- Presentations on the human dimensions of natural resource management and basic concepts of behavior change (30 minutes)
- Presentation on how social indicators are being used for NPS planning and evaluation (45 minutes)
- Break (15 minutes)
- Hands-on work interpreting social data (45 minutes)
- Hands-on work building a survey using the Social Indicators Data Management and Analysis (SIDMA) tool (60 minutes)
- Open discussion about how to apply workshop content in participants' projects (45 minutes)

Takeaway for Participants:

Participants will receive a course book complete with PowerPoint slides, readings, and sample surveys and data. Participants will also receive a login for the SIDMA web-based tool and will gain experience using the tool through workshop exercises.

Nitrogen Tools Workshop

Sunday, July 21, 1:30 – 4:30 p.m.
Tuscany 3

Instructors/Presenters:
Jorge Delgado, USDA ARS; Tibor Horvath, USDA NRCS; Chris Gross, USDA NRCS; Dennis Chessman, USDA NRCS; and Zahangir Kabir, USDA NRCS

Abstract:
Reactive nitrogen losses to the environment have been reported to impact ecosystems, contributing to acidification and eutrophication, algae blooms, nitrate contamination of drinking water, and even higher emissions of trace gases such as nitrous oxide, which has been reported to contribute to global climate change. However, nitrogen is an extremely important nutrient as it contributes to the maximization of crop yields and economic returns for farmers. With continued population growth around the globe, nitrogen will only become more important for future food security. The organizers of this workshop have been part of a collaborative effort to develop nitrogen management tools that can aid in the implementation of conservation practices on the ground to increase nitrogen use efficiency, reduce losses of reactive nitrogen to the environment, and increase economic returns to farmers.

The Nitrogen Index is being used by Natural Resources Conservation Service (NRCS) personnel in Kentucky and California, and there are other NRCS cooperators interested in the use of the tool. The Nitrogen Index is also being used by university cooperators. Additionally, the tool is being used in other countries such as Mexico and Ecuador. The tool can be used to assess the benefits of conservation practices, reduce nitrogen losses, and increase nitrogen use efficiency. In March of 2013, USDA NRCS in Kentucky released its new 590 Nutrient Management Standard, and the new Kentucky Nitrogen and Phosphorous Index is referenced in the standard as the official risk assessment tool for Kentucky. The Nitrogen Index can be downloaded from the official USDA ARS webpage for the tool. The Nitrogen Index can be run in both the English and the metric systems. Additionally, it can be run in the English and Spanish languages. It will soon have the capability to be run in Portuguese as well.

The Nitrogen Index for Windows XP and Windows 7, version 4.5, to be released in the summer of 2013, will have new features, such as a sustainability index, an N_2O index, and a phosphorous index, and also include recommendations for nitrogen fertilizer applications. Users who have a smartphone with the Android system can install a version of the Nitrogen Index app on their device and use the app to transfer assessment information from their device to an office computer. As more of such mobile applications are created, they will increasingly contribute to the development of a new "smart agriculture." This workshop will include three hours of training on the Nitrogen Index.

Handouts will be provided to the attendees of the workshop so that they can follow the presenters' examples.

Leadership Practices in Today's Dynamic World

Sunday, July 21, 2:00 – 3:45 p.m.
Tuscany 2

Instructor:
Marlene K. Rebori, University of Nevada

Abstract:
The growth and expansion of technology over the last decade has not only forced individuals to be sophisticated in managing the media with which we process and share information, but it has also changed the manner in which we communicate. The practice of leadership through on-the-ground advocacy is also shifting to a flatter, less hierarchical style. Emerging trends continue to see the rise of the nonprofit sector and their unique ability to be nimble and adaptable in advocating for change. While the Soil and Water Conservation Society has historical roots and is well respected, thriving professions are ones that can adapt to better fulfill their mission and role in society. As a professional association whose mission is to "foster the science and art of natural resource conservation," this workshop will focus on the art of practicing leadership to accomplish change.

Berg and Society Fellows Forum

Sunday, July 21, 4:00 – 6:00 p.m.
Tuscany 10/11

Implications of Hydraulic Fracturing (Fracking) in Natural Resources Management

This country is searching far and wide for new energy sources, and new techniques to gain access to increasingly difficult supplies are being used. Hydraulic fracturing (fracking) is one of those techniques. According to the Environmental Protection Agency (EPA), "hydraulic fracturing [fracking] produces fractures in the rock formation that stimulate the flow of natural gas or oil, increasing the volumes that can be recovered." Wells may be drilled vertically hundreds to thousands of feet below the land surface and may include horizontal or directional sections extending thousands of feet. Fractures are created by pumping large quantities of fluids at high pressure down a wellbore and into the target rock formation. Many have questioned whether this is an environmentally safe technique to use. Common are the stories of tap water catching on fire or drinking water becoming unfit for consumption. Are these inherent to the fracking technique, or are they isolated events?

The SWCS Society and Berg Fellows will host a moderated policy forum with three distinguished panelists who will provide a description of the fracking technique as well as discuss the benefits, safety, and environmental implications of fracking. Panelists will include Timothy Worley, executive director of the California-Nevada Section of the American Water Works Association; Glenn Miller, professor in the Department of Natural Resources and Environmental Science at the University of Nevada-Reno; and Simon Lomax, research director of Energy In Depth. The forum will be moderated by Andy Manale, US Environmental Protection Agency (retired) and former chair of the SWCS Science and Policy Committee.

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Monday, July 22 Schedule and Event Descriptions

7:30 AM	Registration Opens	Registration Desk
7:30 AM	Professional Development Committee Meeting	Tuscany 7
8:30 AM	Opening Plenary and Pritchard Lecture	Tuscany 11/12
10:00 AM	Morning Break: Exhibit Hall and Poster Presentations Open	Tuscany D/E/F
10:30 AM	Concurrent Sessions	See Page 25
10:30 AM	NIFA Special Symposium	Tuscany 9 and 11/12
12:00 PM	Lunch Break	On your own
12:00 PM	*ARCSE Lunch and Annual Business Meeting	Oceano Restaurant
1:30 PM	Concurrent Sessions	See Page 26
3:00 PM	ARCSE Board Meeting	Oceano Restaurant
3:00 PM	Afternoon Break	Tuscany D/E/F
3:30 PM	Concurrent Sessions	See Page 27
5:00 PM	Poster and Exhibitor Reception in Exhibit Hall	Tuscany D/E/F
7:00 PM	Silent Auction Ends	Tuscany D/E/F
7:00 PM	NIFA Grants Workshop	Tuscany 9

*Not included in standard registrations. Additional cost and ticket(s) required to attend.

2013 Pritchard Lecturer: Gene Kelly, Ph.D.

Monday, July 22, 8:30 – 10:00 a.m.
Tuscany 11/12

Landscape Resilience: The Vulnerability of Soils to Changing Climatic and Land Use Conditions

Gene Kelly, Ph.D., is a professor of pedology—the study of soil origin and evolution—and has supervised several large, interdisciplinary research projects examining ecological interplay. He received his bachelor's and master's degrees from Colorado State University and earned his Ph.D. from the University of California at Berkeley. He has been a faculty member of the Colorado State University Department of Soil and Crop Sciences for twenty-five years and was named Department Head in 2011.

Kelly's research program is directed toward studying the origin and evolution of soils and quantifying the biologically mediated processes of soil formation in many environments around the world. He has conducted research on the South African savannah examining the evolution and fundamental role of grasslands in global biogeochemical cycles. He also worked for eight years as administrative leader and principal investigator of CSU's Shortgrass Steppe Long Term Ecological Research Program on Colorado's northeastern plains.

Kelly has been an advisor to the USDA with the National Cooperative Soil Survey and several major soils research programs. He has served as chairman of the Pedology Division of the Soil Science Society of America and was elected Fellow of the Soil Science Society of America in 2009.

His keynote address will examine the vulnerability of soils to changing climatic and land use conditions in the context of our global challenge to both feed an ever-growing population and protect our natural resources.

Exhibitor and Poster Presenter Reception

Monday, July 22, 5:00 – 7:00 p.m.
Tuscany D/E/F

This is your best opportunity to visit with the authors presenting their posters at the meeting, make connections with potential business associates, reconnect with your colleagues, and meet vendors showcasing their newest technology, programs, and products. Light hors d'oeuvres will be served along with a cash bar. A ticket for this event is included with full conference registration. Additional tickets for guests may be purchased at the registration desk for $20/person.

NIFA Grants Workshop

Monday, July 22, 7:00 p.m. – 8:00 p.m.
Tuscany 9

The workshop will address the currently open joint National Science Foundation/USDA grant on Water Sustainability and Climate that closes in September, as well as any other grants that are currently open.

This workshop is open to everyone.

Monday, July 22 Concurrent Educational Sessions

Monday	10:30 a.m.	10:50 a.m.	11:10 a.m.	11:30 a.m.
Tuscany 1 Symposium	CEAP Rangeland Assessment Symposium: Determining Benefits of Conservation on Western Rangelands – *Arnold King, Texas AgriLife Research*			
Tuscany 9 and 11/12 Symposium	NIFA Special Symposium: Water Resources Research, Education, and Outreach (NIFA Land Grant/Sea Grant 406 and NRI) – *Mary Ann Rozum, USDA*			
Tuscany 2 Symposium	Conservation Delivery: New Concepts in Conservation Planning – *Cheryl Simmons, USDA NRCS (Conservation Models, Tools and Technology)*			
Tuscany 3 Symposium	OPEN			
Tuscany 4 Concurrent Sessions	Collaborative Approach to Landscape Scale Restoration and Wildfire Mitigation *Tom Esgate, Lassen County Fire Safe Council* *(Conservation and Environmental Policy and Program Design)*	Conservation, Protection, and Restoration of Critical Lands Using the Clean Ohio Fund *Jerome Iles, Ohio State University Extension* *(Conservation and Environmental Policy and Program Design)*	Potential for Perennial Crops for Bioenergy Production: Results of a Survey in an Iowa Watershed *Sarah Varble, Southern Illinois University* *(Conservation and Environmental Policy and Program Design)*	OPEN
Tuscany 5 Concurrent Sessions	Use of Drought Indicators in Decision-Making Process of Drought Management *Ekaterina Altman, University of South California* *(Adaptation and Mitigation Planning for Drought)*	Greater Quantities of Grain, Cellulosic Biomass and Vegetables are Produced with Less Water and Lower Nutrient Leaching on Highly Permeable Marginal Soil *Alvin Smucker, Michigan State University* *(Adaptation and Mitigation Planning for Drought)*	OPEN	OPEN
Tuscany 6 Concurrent Sessions	Groundwater Hydrology and Producer Water Use: An Integrated Hyro-Economic Model *Chenggang Wang, Texas Tech University* *(Agriculture and Conservation Economics)*	Factors Affecting Adoption of Nitrogen Management Technologies *Catharine Weber, University of Missouri* *(Agriculture and Conservation Economics)*	State Certainty Programs for Landowners and Producers *William Berry, NACD* *(Conservation and Environmental Policy and Program Design/ Agriculture and Conservation Economics)*	Strategies for Expanding the 4R Initiative: A Survey of Agricultural Retailers and Conservation Districts *Doug Lawrence, Blackwoods Group, Inc.* *(Outreach, Education and Community Engagement)*

Monday	**1:30 p.m.**	**1:50 p.m.**	**2:10 p.m.**	**2:30 p.m.**
Tuscany 1 Symposium	CEAP Rangeland Assessment Symposium: Regional and Watershed Assessments of Conservation on Rangelands – *Arnold King, Texas AgriLife Research*			
Tuscany 9 and 11/12 Symposium	NIFA Special Symposium: Water Resources Research, Education, and Outreach (NIFA Land Grant/Sea Grant 406 and NRI) – *Mary Ann Rozum, USDA*			
Tuscany 2 Symposium	Mitigating Drought and Other Impacts of Climate Change through Management to Improve Soil Health and Productivity – *Jorge Delgado, USDA ARS (Adaptation and Mitigating Planning for Drought)*			
Tuscany 3 Symposium	The Next Farm Bill and Implications for Soil and Water Conservation – *Jeremy Peters, American Farmland Trust (Conservation and Environmental Policy)*			
Tuscany 4 Concurrent Sessions	Passive Treatments of Polyacylamide on Turbid Stormwater: Ditch Application Followed by Modified Settling Basin Design *Jihoon Kang, North Carolina State University (Conservation Models, Tools and Technologies)*	The Cost of Cleaner Water: Linking Farmer Incentives to Conservation Outcomes *Lorine Giangola, University of Colorado at Boulder (Conservation Models, Tools and Technologies)*	A Management Tool for Small Community Onsite Wastewater Treatment Systems: The Community System Owner's Guide *Sara Heger, University of Minnesota (Conservation Models, Tools and Technologies)*	OPEN
Tuscany 5 Concurrent Sessions	Protecting the San Francisco River through the Promotion of Community Stewardship in Clifton, Arizona *Berenise Rivera, University of Arizona (Outreach, Education and Community Engagement)*	Stormwater Management Education in Nebraska: Integrating Extension, Teaching and Research *David Shelton, University of Nebraska (Outreach, Education, and Community Engagement)*	The Role of Watershed Management Groups and Key Stakeholders in the Resilience and Sustainability of a Rural Iowa Watershed *Sarah Varble, Southern Illinois University (Outreach, Education and Community Engagement)*	Kansas Extension Education Program on Poultry Litter Utilization and Storage Site Selection to Minimize Impacts on Water Quality *Peter Tomlinson, Kansas State University (Outreach, Education and Community Engagement)*
Tuscany 6 Concurrent Sessions	OPEN			

Monday	**3:30 p.m.**	**3:50 p.m.**	**4:10 p.m.**	**4:30 p.m.**
Tuscany 1 Symposium	CEAP Rangeland Assessment Symposium: Estimating Rangeland Soil Loss – *Arnold King, Texas AgriLife Research*			
Tuscany 9 and 11/12 Symposium	NIFA Special Symposium: Water Resources Research, Education, and Outreach (NIFA Land Grant/Sea Grant 406 and NRI) – *Mary Ann Rozum*			
Tuscany 2 Symposium	Mitigating Drought and Other Impacts of Climate Change through Management to Improve Soil Health and Productivity – *Jorge Delgado, USDA ARS (Adaptation and Mitigating Planning for Drought)*			
Tuscany 3 Symposium	OPEN			
Tuscany 4 Concurrent Sessions	Later Summer Native Plant Establishment *Joe Paternoster, DriWater* *(Conservation Models, Tools and Technologies)*	Databases and Tools to Enable Watershed-Scale Conservation Planning within a Regional Context *Mark Tomer, USDA ARS* *(Conservation Models, Tools and Technologies)*	Restoration of the Hayman Burn Area: A Multi-Model Analysis on the Convergence of Ecological Science and Social Values in Post-Fire Restoration *Andrea Hassler, Rocky Mountain Field Institute* *(Conservation Models, Tools and Technologies)*	OPEN
Tuscany 5 Concurrent Sessions	Effect of Land Use on Soil Aggregate Stability under Slash and Burn Cultivation *Austustine Avwunudiaogba, California State University* *(Soil Resources Assessment and Management)*	Wheat and Radish Companion Planting for Forage and Grain in Both Single and Dual-Purpose Wheat in Kansas *Deann Presley, Kansas State University* *(Soil Resources Assessment and Management)*	Bioenergy Crops for Resilient Landscapes: A Design Case Study and Field Experiences *Maria Negri, Agronne National Labratory* *(Soil Resources Assessment and Management)*	Impact of Conservation Practices on Soil Health *Zahangir Kabir, USDA NRCS* *(Biodiversity Conservation Management/Soil Resources Assessment and Management)*
Tuscany 6 Concurrent Sessions	Iowa Soybean Association Cooperative Conservation for Watershed Health – CIG Project Results *Todd Sutphin, Iowa Soybean Association* *(Water Resource Assessment and Management)*	Atrazine Incorporation and Soil Erosion: Balancing Competing Water Quality Concerns for Claypan Soils *Robert Lerch, USDA ARS* *(Water Resource Assessment and Management)*	Denitrifying Bioreactors: Opportunities and Challenges for Managing Offsite Nitrogen Losses *Arthur Gold, University of Rhode Island* *(Water Resource Assessment and Management)*	Using GIS and Field Assessments to Compare Kansas Riparian Woodlands *Charles Barden, Kansas State University* *(Water Resource Assessment and Management)*

Monday, July 22
Symposium Session Descriptions and Agendas

CEAP Rangeland Assessment Symposium

Arnold King, Texas A&M (TALR)
Monday, July 22, 10:30 a.m. – 5:00 p.m.
Tuscany 1

Session I: 10:30 a.m. to 12:00 p.m.
Determining Benefits of Conservation on Western Rangelands - *Moderator: Mark Weltz, ARS*

Abstract: The Conservation Effects Assessment Project (CEAP) is a multiagency effort to scientifically quantify the environmental benefits of conservation practices used by private landowners participating in US Department of Agriculture (USDA) and other conservation programs. Project findings will guide USDA conservation policy and program development and help farmers and ranchers to make informed conservation choices. These projects address key issues of conservation practice effectiveness on grazing lands, the single largest land type in the United States and critical to the sustainability of the livestock industry; wildlife habitat; unbroken vistas; and clean, available water.

Presentation 1: Conservation Practices Assessment of the Lower Bad River Basin
Presenter: A. Smart, ARS

Presentation 2: Evaluating the Impacts of Conservation Practices on Watershed Health in a Salmon-Bearing Rangeland Watershed: Asotin Creek, Washington
Presenter: Linda Hardesty, ARS

Presentation 3: Assessing Rangeland Watershed Practices in Central Texas
Presenter: Bill Fox, Texas A&M (TALR)

Presentation 4: Grazing Land Conservation Practices and Drought on Southwestern Watersheds
Presenter: Mitchel P. McClaran, ARS

Session II: 1:30 to 3:00 p.m.
Regional and Watershed Assessments of Conservation on Rangelands: Current Capabilities - *Moderator: Tom Gerik, Texas A&M (TALR)*

Abstract: In this symposium we will present several watershed assessment techniques that USDA has developed to address challenges that incorporate ecological concepts and rangeland management practices, use readily available data, and are designed to represent rangeland hydrologic and erosion processes. We will discuss USDA's current capabilities and alternative approaches to assessing the status, health, and potential benefits of conservation on rangeland watersheds through three case studies.

Presentation 1: Conservation Effects Assessment Project Sources and Modeling Design
Presenter: Leonard Jolley, ARS

Presentation 2: Watershed Assessment of Impact of Conservation in Southern Arizona
Presenter: Dave C. Goodrich, ARS

Presentation 3: Assessing the Effect of NRCS Conservation Programs in Arizona on Rangeland Vegetation Using Remote Sensing
Presenter: Philip Heilman, ARS

Presentation 4: A Decade of Advancement in Understanding of Rangeland Hydrology and Erosion and the Effects of Conservation Practices
Presenter: Frederick B. Pierson

Session III: 3:30 to 5:00 p.m.
Estimating Rangeland Soil Loss: Can We Quantify Benefits of Conservation? - *Moderator: Arnold King, Texas A&M (TALR)*

Abstract: In this symposium we will present the status and current capability of Rangeland Hydrology and Erosion Model (RHEM) for estimating soil erosion and deposition from splash, sheet flow, and concentrated flow erosion. In addition, we will discuss concepts of how RHEM can be used to determine risk of soil erosion from specific return period runoff events and how changes in management through implementing conservation can alter the risk of soil erosion. Finally, we will discuss how RHEM can be used to describe rangeland hydrologic processes and enhance Ecological Site Descriptions.

Presentation 1: Rangeland Hydrology and Erosion Model
Presenter: Fred Pierson

Presentation 2: Modeling Soil Erosion Impact of Rangeland Disturbance Using the Rangeland Hydrology and Erosion Model
Presenter: Osama Al-Hamdan

Presentation 3: Estimating Concentrated Flow Erosion and Deposition on Rangelands
Presenter: S. Kossi Nouwakpo

Presentation 4: Eco-hydrology Considerations for Enhancement of Ecological Site Descriptions
Presenter: C. Jason Williams

National Institute of Food and Agriculture (NIFA) Special Symposium: Water Resources Research, Education, and Outreach (NIFA Land Grant/Sea Grant 406 and NRI)

Mary Ann Rozum, USDA
Monday, July 22, 10:30 a.m. – 5:00 p.m.
Tuscany 9 and 11/12

Abstract: The USDA NIFA Symposium will include oral reports or "speed science" from active NIFA funded grants in research, extension, and education of water quality and quantity. The poster sessions will include recently awarded grants, as well as the regional grants that will have local descriptions of activities.

Conservation Delivery: New Concepts in Conservation Planning

Cheryl Simmons, USDA NRCS
Monday, July 22, 10:30 a.m. – 12:00 p.m.
Tuscany 2

Abstract: Providing science-based technical assistance to clients is the foundation for successfully carrying out NRCS' mission of helping people help the land. NRCS' on-site assistance to help grazers identify conservation objectives, inventory resource concerns and opportunities, analyze alternatives, and formulate treatments through conservation planning is unique. In general, this technical assistance is documented in 1.6 million conservation plans and 30 million planned practices in NRCS' National Conservation Plan Database.

In 2002, the Farm Bill expanded NRCS' historical field operations to include the development and administration of contracts and easements for financial assistance programs. In addition to providing technical assistance, NRCS field staffs now manage about 400,000 Farm Bill program contracts. With stagnant to decreasing staff numbers, NRCS continued to deliver more programs and more dollars on more acres. In January of 2009, NRCS leadership responded to these concerns by formally initiating the Conservation Delivery Streamlining Initiative, with the purpose to define and implement a more effective, efficient, and sustainable business model for conservation planning and delivering conservation assistance.

The new Conservation Desktop is planned to roll out in 2014 with NRCS Client Gateway, geospatial tools to support participation in programs, GRAS plan, and a revised resource concern list. An overview of some of the new look and feel for conservation planning will be presented with a discussion of what is next in conservation planning.

The Next Farm Bill and Implications for Soil and Water Conservation

Jeremy Peters, American Farmland Trust
Monday, July 22, 1:30 – 3:00 p.m.
Tuscany 3

Abstract: Passage of a five-year farm bill continues to be a primary focus of agriculture and conservation groups, but timing remains to be uncertain as to when a new bill will be completed.

Many conservation provisions are in play, including some exciting changes in the conservation program toolbox, conservation compliance, and a national sodsaver program. If a five-year bill is passed before the conclusion of the 112th Congress or in the early days of the 113th Congress, focus will immediately shift to USDA rulemaking and how that process will play out.

If a five-year bill is not passed in the near term, work will begin to reengage the 113th Congress to craft legislation. Either scenario presents important policy information for SWCS conference attendees.

Mitigating Drought and Other Impacts of Climate Change through Management to Improve Soil Health and Productivity

Jorge Delgado, USDA ARS
Monday, July 22, 1:30 – 5:00 p.m.
Tuscany 2

Abstract: The 14th Annual SWCS-Soil Science Society of America (SSSA) Joint Symposium covers a topic of great importance and interest to both societies. It is clear from recent publications that climate change, specifically extreme events, can significantly impact food security. It is also clear from these publications that conservation agriculture will be essential for improving soil health and soil quality in order to have systems that are resilient to drought, which will be critical in efforts to achieve sustainable food security. NRCS is starting a new initiative on soil health, and this will be important for climate change adaptation. This symposium will also cover limited irrigation since drought and lower precipitation can decrease water availability. This will be important for the western United States in states such as Nevada, where the 2013 SWCS meeting is held. This joint symposium will continue the tradition of cooperation between the two societies and will help to create opportunities to disseminate cutting-edge information to members of both societies. It will also help to "jumpstart" a conversation about the importance of the soil health initiative, especially in current times of extreme events and a changing climate. This is an important topic to cover within the context of the current farm bill, which is still in development. The SWCS and SSSA have always been at the forefront of conservation and soil science, and the topic of this year's SWCS meeting, Resilient Landscapes: Planning for Flood, Drought and Fire, connects with current global issues related to soil and water conservation and sustainability, such as the connections between soil health, drought, and water resources.

Session I

1:30 – 1:35 pm Introductory Remarks
Moderator: Jorge A. Delgado, USDA ARS

1:35 – 1:55 pm Are Our Water Use Policies in Sync with the Reality of a Changing Climate?
Loretta Singletary, University of Nevada, Reno

1:55 – 2:15 pm Potential to Use Limited Irrigation and Conservation Agriculture to Adapt to Drought and Climate Change
Thomas J. Trout, Kendall DeJonge, and Louise Comas, USDA ARS

2:15 – 2:35 pm Differences in Minnesota Endoaquoll Soils as a Result of Subsurface Drainage and Cultivation
Jeffrey S. Strock, Paulo H. Pagliari, Stacey E. Feser, Emily E. Evans, and Mark R. Coulter, University of Minnesota

2:35 – 2:55 pm Unlock the Secrets in the Soil: A Practical Approach to Improve Soil Health in the 21st Century
David Lamm, USDA NRCS

2:55 – 3:00 pm Discussion/Adjourn

Session II

3:30 – 3:35 pm Introductory Remarks
Jorge A. Delgado, USDA ARS

3:35 – 3:55 pm Management Impacts on GHG Emissions in Corn/Soybean Systems
Rodney T. Venterea and John M. Bake, University of Minnesota; USDA ARS

3:55 – 4:15 pm Soil and Water Conservation Practices to Mitigate Drought and Climate Change
Jerry L. Hatfield, John H. Prueger, and Thomas J. Sauer, USDA ARS

4:15 – 4:35 pm Building Soil Health Can Contribute to Climate Change (and Drought) Adaptation and Mitigation
Susan Andrews, USDA NRCS

4:35 – 5:00 pm Panel Discussion with All Presenters

5:00 pm Adjourn

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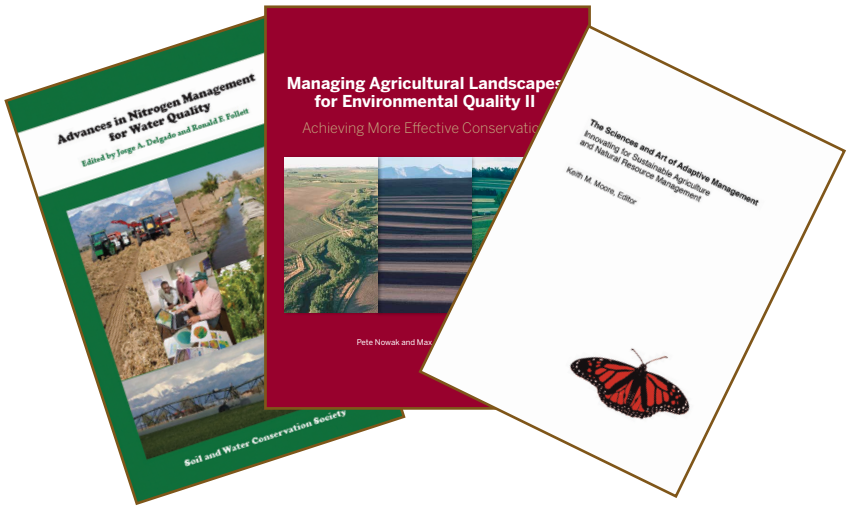

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Conservation NewsBriefs is a weekly service aimed at providing SWCS members and stakeholders in the conservation community with timely updates on soil and water conservation issues in the news. This informative weekly digest of current news (from a variety of national and international news outlets) is delivered directly to the subscriber's inbox every Thursday. Conservation NewsBriefs has more than 23,000 subscribers.

Tuesday, July 23 Schedule and Event Descriptions

7:30 AM	Registration Opens	Registration Desk
8:00 AM	Tuesday Plenary	Tuscany 11/12
10:00 AM	Morning Break in Exhibit Hall	Tuscany D/E/F
10:30 AM	Concurrent Sessions	See page 34
12:00 PM	*Awards Luncheon	Tuscany 10
12:00 PM	Lunch Break	On your own
1:30 PM	Concurrent Sessions	See page 35
3:30 PM	Concurrent Sessions	See page 36
5:15 PM	SWCS Annual Conference Program Committee	Tuscany 10

*Not included in standard registrations. Additional cost and ticket(s) required to attend.

Tuesday Morning Plenary Session

Tuesday, July 23 – 8:00 a.m.
Tuscany 11/12

Soil Health: Implications for Landscape Resilience

Our Tuesday morning panel, moderated by Wayne Honeycutt, will discuss the serious impacts that climate change and weather variability have had on our agricultural soils and the role that management practices, such as cover crops or livestock-based systems, can have in restoring and maintaining soil health for productive lands.

Jerry L. Hatfield, Ph.D., is the Laboratory Director of the USDA Agricultural Research Service National Laboratory for Agriculture and the Environment in Ames, Iowa. His research focuses on quantifying the interactions among the components of the soil-plant-atmosphere system to quantify resilience of cropping systems to climate change. He currently serves as the convening lead author on the agriculture sector report and the Midwest region report for the 2013 National Climate Assessment and a lead scientist on the Agriculture Indicators team for climate assessments. Hatfield has also served on the SWCS Board of Directors.

Wayne Honeycutt, Ph.D., is the Deputy Chief for Science and Technology for the USDA Natural Resources Conservation Service. Previously, he served as a research soil scientist for 14 years and a research leader for 10 years at the USDA Agricultural Research Service New England Plant, Soil, and Water Laboratory where he conducted research on carbon and nitrogen cycling, soil health, and development of sustainable cropping systems. He has authored or coauthored over 75 publications in peer reviewed scientific journals and 5 book chapters.

Gene Kelly, Ph.D., is a professor of pedology in the Colorado State University Department of Soil and Crop Sciences and has supervised several large, interdisciplinary research projects examining ecological interplay. Kelly's research program is directed toward studying the origin and evolution of soils and quantifying the biologically mediated processes of soil formation in many environments around the world. He has also served as an advisor to the USDA with the National Cooperative Soil Survey and several major soils research programs.

Jean L. Steiner, Ph.D., is the Director of the Grazinglands Research Laboratory in El Reno, Oklahoma, where she conducts research on watersheds and climate and leads research in sustainable forage-grazing systems. She has been employed by the USDA Agricultural Research Service since 1983, first in Bushland, Texas, focusing on water conservation, crop residue management, and energy balance research in dryland agricultural systems and then leading research at Watkinsville, Georgia, on sustainability of agriculture at farm and watershed scales, prior to coming to Oklahoma in 2001. Steiner has served on the Board of Directors and as President of the SWCS.

Tuesday, July 23 Concurrent Educational Sessions

Tuesday	10:30 a.m.	10:50 a.m.	11:10 a.m.	11:30 a.m.
Tuscany 1 Symposium	OPEN			
Tuscany 9 Symposium	Conservation Activity Planning for TSPs – *Cheryl Simmons, USDA NRCS (Conservation Models, Tools and Technology)*			
Tuscany 2 Symposium	A Living River Approach to Floodplain Management in the Carson River Watershed – *Brenda Hunt, Carson Water Subconservancy District (Conservation and Environmental Policy)*			
Tuscany 3 Concurrent Sessions	Using LiDAR Elevation Data to Advance Local Conservation Work *Ann Lewandowski, University of Minnesota Water Resources Center (Water Resource Research and Outreach in the Upper Midwest)*	Midwest Cover Crops Council: A Regional Collaboration that Works *Dean Baas, Michigan State University Extension (Water Resource Research and Outreach in the Upper Midwest)*	The Conservation Reserve Program Readiness Initiative: Training Impacts and Resources *Rebecca Power, University of Wisconsin-Extension, Madison, Wisconsin (Water Resource Research and Outreach in the Upper Midwest)*	Reducing Nitrate Loads from Tile-Drained Cropland: Options and Outlook *Jane Frankenberger, Purdue University (Water Resource Research and Outreach in the Upper Midwest)*
Tuscany 4 Concurrent Sessions	Effects of Repeated Burning on Soil Nitrogen and Cheatgrass (Bromus Tectorum) Biomass and Reproduction *Rachel Jones, University of Nevada (Invasive Plant Species)*	Post-Fire Land Restoration, Weed Management, and Soil Biology in Northern Nevada *Julie Etra, WBS, Inc. (Invasive Plant Species)*	OPEN	OPEN
Tuscany 5 Concurrent Sessions	Conservation vs. Organic Agriculture with Conventional and Conservation Tillage: Water Quality *Deanna Osmond, North Carolina State University (Water Resource Assessment and Management)*	Leadership for Midwestern Watersheds: Insights from MRBI and other Watershed Project Managers *Michael Baise, American Farmland Trust (Water Resource Assessment and Management)*	Tamarisk Removal for Conservation of Cultural Resources *Beverly Harry, Pyramid Lake Paiute Tribe (Water Resource Assessment and Management)*	Resiliency of Conservation Buffers to Floods and Drought in Iowa and Illinois *Jeff Jensen, Trees Forever (Water Resource Assessment and Management)*
Tuscany 6 Concurrent Sessions	Targeting Forest Management through Fire and Erosion Modeling *William Elliot, Rocky Mountain Res Station (Adaptive Management of Conservation Efforts)*	Perennial Grass Dominance: Creating a Resilient Community in an Exotic Annual Invaded Rangeland *Dan Harmon, USDA ARS (Adaptive Management of Conservation Efforts)*	Enhancing Ecosystem Services: Designing for Multi-Functionality *Gary Bentrup, U.S. Forext Service (Adaptive Management of Conservation Efforts)*	Local Cooperation through Climate Change Data Visualization *Leigh Bernacchi, University of Idaho (Outreach, Education and Community Engagement/ Adaptive Management of Conservation Efforts)*

Tuesday	1:30 p.m.	1:50 p.m.	2:10 p.m.	2:30 p.m.
Tuscany 1 Symposium	Conservation Performance in the Face of a Changing Climate: Improving Conservation Practice Standards and Enhancements to Increase Farm and Resource Resiliency – *Jeff Schahczenski (Conservation and Environmental Policy)*			
Tuscany 9 Symposium	Conservation Activity Planning for TSPs – *Cheryl Simmons, USDA NRCS (Conservation Models, Tools and Technology)*			
Tuscany 2 Symposium	SWCS and CPESC: An Evolving and Productive Partnership – *Earl Norton, Alabama Soil and Water Conservation (Outreach, Education and Community Engagement)*			
Tuscany 3 Symposium	OPEN			
Tuscany 4 Concurrent Sessions	Statistical Model Equivalency to Predict Fecal Indicator Bacteria Densities Enumerated by QPCR and Culture-Based Methods *Rachel Noble, UNC Chapel Hill (Water Resource Assessment and Management/NIFA-Related)*	Surfactant-Facilitated Transport of Cryptosporidium Parvum in Soil *Christophe Darnault, Rensselaer Polytechnic Institute (NIFA-Related)*	Potential Water Benefits of On-Farm Storage Systems *Mary Love Target, Mississippi State University (NIFA-Related)*	Using Vetiver Grass Technology for Preventing Sedimentation at the Shorelines of Guam *Mohammad Golabi, University of Guam (Water Resources Assessment and Management)*
Tuscany 5 Concurrent Sessions	Redox-Specific Biodegradation of Trenbolone Acetate Metabolites *Emily Cole, University of Nevada (Rangeland Conservation and Grazinglands CEAP)*	Fate and Transport of Trenbolone Acetate Metabolites in Range Runoff *Gerrad Jones, University of Nevada (Rangeland Conservation and Grazinglands CEAP)*	Modeling the Impacts of Conservation Practices on Streamflow and Erosion in a Salmon-Bearing Rangeland Watershed: Asotin Creek, Washington *Hakjun Rhee, Washington State University (Rangeland Conservation and Grazinglands CEAP)*	OPEN
Tuscany 6 Concurrent Sessions	Restoration of 2011 Flood Damaged Birds Point - New Madrid Floodway *Kenneth Olson, University of Illinois (Adaptive Management of Conservation Efforts)*	OPEN	The Use of Biochar on Low Organic Matter Soils *Duane Friend, University of Illinois (Adaptive Management of Conservation Efforts)*	Creating Climate-Smart Ag Landscapes through Agroforestry *Gary Bentrup, U.S. Forest Service (Adaptive Management of Conservation Efforts)*

Tuesday	**3:30 p.m.**	**3:50 p.m.**	**4:10 p.m.**	**4:30 p.m.**
Tuscany 1 Symposium	Conservation Performance in the Face of a Changing Climate: Improving Conservation Practice Standards and Enhancements to Increase Farm and Resource Resiliency – *Jeff Schahczenski, NCAT (Conservation and Environmental Policy)*			
Tuscany 9 Symposium	Conservation Activity Planning for TSPs – *Cheryl Simmons, USDA NRCS (Conservation Models, Tools and Technology)*			
Tuscany 2 Symposium	Agriculture and Forestry in a Changing Climate: Adaptation Recommendations – *Jeremy Peters, American Farmland Trust (Adaptive Management of Conservation Efforts)*			
Tuscany 3 Symposium	OPEN			
Tuscany 4 Concurrent Sessions	Assessment of Soil Response to Corn Residue Removal and Grazing *Humberto Blanco, University of Nebraska* *(Soil Resources Assessment and Management)*	Hydrological Response of Intensive Forest Management System in Tropical Rain Forest *Hatma Suryatmojo, Kyoto University* *(Soil Resources Assessment and Management)*	Microbial Biomass Determinations and Some Microbial Quality Indicators for Improving Soil Sustainability *Stella Asuming-Brempong, University of Ghana, Legon* *(Biodiversity Conservation Management/Soil Assessment and Management)*	OPEN
Tuscany 5 Concurrent Sessions	OPEN	Feasibility of Soil Carbon Monitoring for Carbon Credits *Jason Warren, OSU* *(Rangelands Conservation and Grazinglands CEAP)*	Rehabilitation of Cheatgrass Infested Rangelands *Charlie Clements, USDA ARS* *(Rangelands Conservation and Grazinglands CEAP)*	Modeling Grazing Impacts on Soil Erosion with the WEPP Model *William Elliot, Rocky Mountain Res Station* *(Rangelands Conservation and Grazinglands CEAP)*
Tuscany 6 Concurrent Sessions	OPEN			

Tuesday, July 23
Symposium Session Descriptions and Agendas

Conservation Activity Planning for TSPs

Cheryl Simmons, USDA NRCS
Tuesday, July 23, 10:30 a.m. – 5:00 p.m.
Tuscany 9

Abstract: This workshop will provide initial training to become a Technical Service Provider for the Natural Resources Conservation Service (NRCS). It emphasizes the initial steps in the conservation planning process and will touch on developing quality, complete plans on the entire unit; consideration of ecological, economic, and social concerns; on-site assistance; the effects and impacts of planned actions on-site and off-site; and partnership involvement. The course is based on the procedures and guidelines in the 2013 release of the National Planning Procedures Handbook (NPPH) and the supporting technology and tools to carry out the planning process.

The USDA NRCS offers 16 different types of CAPs, including 104; 114 and 154, Nutrient-Pest Management Plans; 122; 124, Energy Headquarters and Energy Landscape Plans; 110, Grazing Plan; 106; 142, Forest Plan and Fish and Wildlife Plans; and 138, Organic Plan CAPS covered in this workshop.

10:30 a.m. – 12:00 p.m.	Introduction to Conservation Planning *Dan Meyerhoff and Cheryl Simmons*
1:30 – 2:15 p.m.	TSP Orientation and Overview of CAPs *Tim Pilkowski, National TSP Team, NHQ*
2:15 – 3:00 p.m.	Break out for CAPS: • Energy; Landscape/Operations– *Kip Pheil, National Energy Team, West National Technology Support Center* • Wildlife and Forestry - *TBA* • Organic – *Sarah Brown, National Organic Team*
3:00 – 3:30 p.m.	Break
3:30 – 4:15 p.m.	Continuation of CAP Breakouts
4:15 – 5:00 p.m.	Work with individuals to provide certification information and, if possible, establish TSP profile

A Living River Approach to Floodplain Management in the Carson River Watershed

Brenda Hunt, Carson Water Subconservancy District
John Cobourn, University of Nevada Cooperative Extension
Steve Lewis, University of Nevada Cooperative Extension
Dominique Etchegoyhen, Legacy Land and Water
Mitch Blum, HDR, Inc.
Tuesday, July 23, 10:30 a.m. – 12:00 p.m.
Tuscany 2

Abstract: The Carson River flows from the Sierra of Alpine County, California 180 miles eastward through rich agricultural valleys and growing urban centers to Churchill County in Nevada's Great Basin desert. The Carson River Coalition (CRC) is a multiagency and citizen's stakeholder group that promotes integrated watershed management. In 2003, CRC members voted protection of the floodplain the most critical message for public outreach. By 2008, the CRC developed a Regional Floodplain Management Plan (RFMP) that was adopted by five counties within the watershed.

The RFMP promotes a "living river" approach that maintains floodplain lands in an open state providing natural low cost flood protection. This approach creates resiliency by keeping structures/infrastructure out of harm's way. It accepts that rivers are dynamic and need room to meander across their floodplains. It also creates resiliency by enhancing groundwater recharge, water quality, and wildlife habitat.

Implementation of the living river approach is in progress. Research ascertained public perceptions of floodplain issues using workshops, surveys, and other means. Preliminary results indicate a lack of public awareness of the ecosystem services provided by undeveloped floodplains. Elements of the floodplain education program recommended by the RFMP have been implemented. A more robust outreach program is currently in development. Mechanisms for supporting agriculture and open space in floodplains are being implemented by the counties and local non-profits. These include transfer of development rights, conservation easements, and public acquisitions. Under FEMA's Cooperating Technical Partner program, a consultant is performing flood hazard mapping and unsteady state modeling to better assess cumulative impacts of land use changes on a watershed scale.

Although many challenges remain to fully implement the RFMP, the CRC's efforts show continued enthusiasm and extraordinary commitment in seeing the plan succeed.

Conservation Performance in the Face of a Challenging Climate: Improving Conservation Practice Standards and Enhancements to Increase Farm and Resource Resiliency

Jeff Schahczenski, NCAT
Tuesday, July 23, 1:30 – 5:00 p.m.
Tuscany 1

Abstract: This symposium will feature speakers who have participated in a three-year Natural Resources Conservation Service (NRCS) National Conservation Innovation grant (CIG) project that led to specific recommendations to better integrate sustainable—including organic—production systems into NRCS programs and procedures, and to make NRCS programs more accessible to sustainable and organic farmers. Project partners worked closely with NRCS to update program components, including dozens of conservation activity standards to increase the resiliency of farming systems and the natural resources upon which they depend. Panelists will present the results of this project in two 90-minute sessions.

Session I - The Conservation Stewardship Program: Rewarding Farmers and Ranchers Who Build and Manage Resilient Systems.

This session will focus on the current limitations of and recent improvements to the Conservation Stewardship Program (CSP) based on the initial results of an ongoing, three-year CIG project. Project partners worked with hundreds of farmers, NRCS personnel, and external experts to develop recommendations to increase the capacity of NRCS to promote resilient farming systems through the CSP. Focal points of the project include the Conservation Measurement Tool's baseline questions and scores, comprehensive conservation planning, and CSP enhancements.

Session II - Improving Conservation Practice Standards to Enhance Resilient Production Systems: Challenges and Opportunities.

The Environmental Quality Incentives Program (EQIP) promotes conservation on farms by offering cost-share to farmers who wish to install conservation practices on their land. Many of these practices are designed to promote incremental improvements on high-efficiency, low-complexity operations. This panel will highlight some of the 41 recommendations made to the NRCS aimed at improving conservation practice standards to support complexity and resiliency in sustainable farming systems.

SWCS and CPESC: An Evolving and Productive Partnership

Earl Norton, Alabama Soil and Water Conservation
Tuesday, July 23, 1:30 – 3:00 p.m.
Tuscany 2

Abstract: The Certified Professional in Erosion and Sediment Control (CPESC) certification came into the world in 1982 under the umbrella of the SWCS and was incorporated in 2001 as CPESC Inc. It is supported by a volunteer council of regional and area representatives and a paid staff.

CPESC is now an established international certification and recognized by many units of government with laws, ordinances, and regulations designed to minimize the misuse of land and water resources. There are over 4,000 CPESCs over the world with approximately 3,500 CPESCs in the United States. CPESCs work cooperatively on teams with professional engineers, architects, foresters, or other design professions and contractors and compliment the team approach to developing sound resource management plans.

While obvious to leaders of both the SWCS and the CPESC program that each organization can support the other and gain mutual benefits, only the SWCS international organization and a few SWCS chapters have developed activities to gain potential benefits.

The presentation will describe how SWCS chapters benefit as participants in CPESC activities sponsored by chapters become familiar with SWCS and consider attending future SWCS events and becoming SWCS members if they are not members already. CPESCs benefit through such activities by finding opportunities for exams and continuing education in more convenient locations. Looking at a larger picture, the environment benefits as more individuals become CPESCS and as current CPESCs attain their continuing education with all of these CPESCSs providing sound technical support in the management of various landscapes.

Agriculture and Forestry in a Changing Climate: Adaptation Recommendations

Ernie Shea, 25x'25 Alliance
Jeremy Peters, American Farmland Trust
Lois Wright-Morton, Iowa State University
Jerry Hatfield, USDA ARS
Tuesday, July 23, 3:30 – 5:00 p.m.
Tuscany 2

Abstract: Many farmers, foresters, and ranchers throughout the United States are adjusting their operations to reduce the risks associated with increasingly variable and unpredictable weather. In addition, producers are facing unprecedented economic, social, and environmental pressures which require that they balance for multiple outcomes. These challenges include feeding, clothing, housing, and fueling a rapidly growing world, making decisions in increasingly volatile local and global markets, and managing to continually renew and protect soil, water, and air resources.

But farmers, ranchers, and foresters are not solely at the mercy of these trends. Rather, there are many options available to mitigate risks while strengthening production, cutting input costs, and improving the quality of the land — even in the context of weather-related disasters like those experienced in 2011 and 2012. A recent report produced by the 25x'25 Alliance's Adaptation Work Group, entitled "Agriculture and Forestry in a Changing Climate: Adaptation Recommendations," offers various pathways in the areas of research, production systems, risk management, decision tools, and outreach for building a more resilient agriculture and forestry system. The recommendations of the Adaptation Work Group, which is a collaboration of leaders from the agriculture, forestry, business, academic, conservation, and government sectors, were shaped by four overlapping goals: profitability, productivity, stewardship, and self-determination.

Hear about the report and participate in a dialogue on the steps needed to prepare agriculture and forestry for an uncertain future.

Place your bids in this year's Silent Auction!

The auction items, including local goods, prepared baskets, and trips generously donated by SWCS chapters and members, can be viewed in the Exhibit Hall. Bidding will close at 7:00 p.m. on Monday night.

Please pick up your winnings at the close of the auction and plan to pay by check or cash. Proceeds of the auction will fund scholarships awarded by the California-Nevada Chapter.

Wednesday, July 24 Schedule and Event Descriptions

Outdoor Classroom/Educational Tours
All participants should meet at least 15 minutes prior to the departure times listed below.

7:00 AM – 3:45 PM	*Tour #1 – Perrazzo Watershed and US Forest Service Aspen/Forest Restoration Projects Tour
7:00 AM – 3:30 PM	*Tour #2 – Mount Rose Summit Snow Survey, Nevada Tahoe Conservation District and Forestry Restoration Tour
8:00 AM – 12:30 PM	*Tour #3 – Eagles and Agriculture Program

Complete tour descriptions can be found online at www.swcs.org/13AC.
Buses will leave on time. Please be ready board the bus 15 minutes before your tour departs. All buses will depart from the hotel valet area.

Tour #1: Perrazzo Watershed and US Forest Service Aspen/Forest Restoration Projects Tour
7:00 a.m. – 3:45 p.m. ($75)

District Ranger Quentin Youngblood and his staff from the Tahoe National Forest will lead a bus tour that will visit the Perrazzo Watershed Restoration Project, just north of Truckee, California, where the project has restored stream sinuosity and montane meadow function. The stream/meadow system was ditched in the early 1900s to provide for grazing associated with early dairy operations. There will be a good discussion involving water rights, "Plug and Pond" watershed restoration techniques, and the removal of historic railroad grades to restore watershed function.

In addition, there will be stops to view fuel reduction projects as well as aspen restoration. The aspen restoration projects are within and adjacent to streams/meadows, and discussion will focus on timber harvesting techniques associated with sensitive areas. The tour participants will have to walk up to a ¼ mile from the bus stop areas, so please bring comfortable footwear.

Box lunch will be served. Time and route of tour subject to change.

Tour #2: Mount Rose Summit Snow Survey, Nevada Tahoe Conservation District and Forestry Restoration Tour
7:00 a.m. – 3:30 p.m. ($75)

The bus tour visits the Mount Rose Summit with spectacular views and stops at the snow survey spot to listen to NRCS hydrologist Dan Greenlee's presentation on the Nevada SNOWS Program. The tour participants will have to walk about ¼ mile from the bus stop area to the snow survey spot, so please bring comfortable footwear.

Doug Martin and his staff from the Nevada Tahoe Conservation District will present a low impact storm water infiltration basin design by the district for a subdivision in Incline Village, Nevada, to reduce soil erosion and sedimentation, and very close by, the tour will stop at a successful stream bank restoration site.

The bus will continue to Lake Forest where soil scientist and restoration practitioner Michael Hogan will give a tour of the Truckee and north Tahoe areas. This tour will visit a number of sites that track and demonstrate the development of innovative, soil-based techniques. Information will be shared on soil enhancement techniques and assessment methodology, as well as demonstration of simulated rainfall and runoff tools which have been used to enhance understanding and measure the benefits of treatments.

Box lunch will be served. Time and route of tour subject to change.

Tour #3: Eagles and Agriculture Program
8:00 a.m. – 12:30 p.m. ($55)

University of Nevada Douglas County Extension educator Steve Lewis said the Eagles and Agriculture Program is aimed at educating Nevadans while creating economic opportunities in Douglas County. "Eagles and Agriculture is meant to encourage the conservation and prosperity of agriculture in western Nevada, create and demonstrate sustainable agricultural tourism, promote the benefits of agriculture and wildlife relationships, and educate Nevadans about the history of agriculture and eagle habitats in Douglas County."

Mike Hayes from the Carson Valley Conservation District will present some success stories in soil erosion, stream restoration, and invasive weed control projects. The tour participants will also have a chance to learn about the ongoing ranchland trust efforts to protect ranchland from the ever-increasing development pressure. This tour will pass by the scenic Washoe Lake south of Reno.

Box lunch will be served. Time and route of tour subject to change.

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The Future of Our Soil and Water Resources
in Chicago, Illinois, for the

69th Annual International SWCS Conference
July 27-30, 2014, at the Westin Lombard

Hosted by the Illinois Chapter
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SWCS Conference Sites and Presidents

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1947 Omaha, NE, Ralph H. Musser
1948 Cincinnati, OH, T.S. Buie
1949 St. Louis, MO, Lloyd E. Partain
1950 Detroit, MI, Firman E. Bear
1951 Memphis, TN, Morris E. Fonda
1952 Buffalo, NY, Morris E. Fonda
1953 Colorado Springs, CO, H.H. Bennett
1954 Jacksonville, FL, R.Y. Bailey
1955 Green Lake, WI, Austin L. Patrick
1956 Tulsa, OK, Edward H. Graham
1957 Pacific Grove, CA, J.S. Russell
1958 Asheville, NC, Russell G. Hill
1959 Rapid City, SD, Alvin C. Watson
1960 Guelph, ON, Elmer L. Sauer
1961 Lafayette, IN, Walter C. Gumbel
1962 Washington, DC, Roy D. Hockensmith
1963 Logan, UT, George M. Browning
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1965 Philadelphia, PA, Minott Silliman, Jr.
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1967 Des Moines, IA, Cecil W. Chapman
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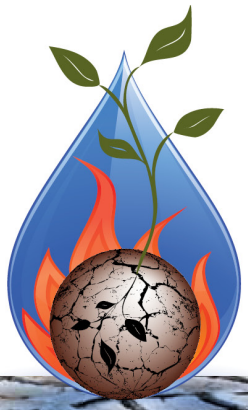
1971 Columbus, OH, Einer L. Roget
1972 Portland, OR, J.R. Johnston
1973 Hot Springs, AR, A.B. Linford
1974 Syracuse, NY, William L. Vaught
1975 San Antonio, TX, Frank W. Schaller
1976 Minneapolis, MN, Chester E. Evans
1977 Richmond, VA, J. Vernon Martin
1978 Denver, CO, Arthur D. Latornell
1979 Ottawa, ON, William Moldenhauer
1980 Dearborn, MI, Gerald R. Calhoun
1981 Spokane, WA, Jesse L. Hicks
1982 New Orleans, LA, Robert C. Baum
1983 Hartford, CT, Chris J. Johannsen
1984 Oklahoma City, OK, Floyd E. Heft
1985 St. Louis, MO, Roland R. Willis
1986 Winston-Salem, NC, Joe D. Nichols
1987 Billings, MT, Maurice G. Cook
1988 Columbus, OH, Donald Van Meter
1989 Edmonton, AB, David R. Cressman
1990 Salt Lake City, UT, Richard Duesterhaus
1991 Lexington, KY, Richard Duesterhaus
1992 Baltimore, MD, Ronald J. Hicks
1993 Fort Worth, TX, Ronald J. Hicks
1994 Norfolk, VA, Calvin J. Perkins
1995 Des Moines, IA, Gary Steinhardt
1996 Keystone Resort, CO, John A. Knapp
1997 Toronto, ON, Aniko Szojka-Parnell
1998 San Diego, CA, Aniko Szojka-Parnell
1999 Biloxi, MS, Dennis Pate
2000 St. Louis, MO, Dennis Pate
2001 Myrtle Beach, SC, Dana Chapman
2002 Indianapolis, IN, Bob Eddleman
2003 Spokane, WA, Myron Senechal
2004 St. Paul, MN, Deborah Cavanaugh-Grant
2005 Rochester, NY, Jean Steiner
2006 Keystone, CO, Jean Steiner
2007 Tampa, FL, Theo Dillaha
2008 Tucson, AZ, Peggie James
2009 Dearborn, MI, Peggie James
2010 St. Louis, MO, Gary Steinhardt
2011 Washington, DC, Bill Boyer
2012 Fort Worth, TX, Bill Boyer
2013 Reno, NV, Dan Towery
2014 Chicago, IL, Dan Towery

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The one with calloused hands.
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That feed your family.
That feed the community.
And help feed the world.
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