



Healthy Land, Clean Water:

CULTIVATING A LEGACY OF CONSERVATION

78th SWCS INTERNATIONAL ANNUAL CONFERENCE

DES MOINES, IOWA

AUGUST 6-9, 2023

FINAL PROGRAM

DOWNLOAD THE EVENT APP

1. Download the official SWCS event app for iOS or Android by searching for SWCS in the app store.
2. Once the app is installed, enter the email address you used to register.
3. Create or enter your password. Select "forgot password" to reset if needed.
4. Under "Current & Upcoming Events," select "78th SWCS International Annual Conference."



**Biodiversity is essential
for crop diversity. We are
committed to partnering
with stakeholders across
the value chain to help
enhance pollinator
health and promote good
stewardship practices
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JOIN THE CONVERSATION ONLINE!



#SWCS23
@SWCSNEWS

CONFERENCE SCHEDULE IN BRIEF

All sessions are included with conference registration, unless otherwise indicated.

SUNDAY, AUGUST 6

9:30 AM – 11:00 AM <i>Off-site at SWCS Headquarters (945 SW Ankeny Road, Ankeny)</i>	SWCS Headquarters Open House
11:00 AM – 5:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
12:00 PM – 5:00 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Exhibit and Poster Set Up
12:00 PM – 12:30 PM <i>Room 306 on the Main Level</i>	New Member and First Timer Orientation
1:00 PM – 4:00 PM <i>Room 307 on the Main Level</i>	*Workshop 1: ACPF Watershed Applications Training
1:00 PM – 4:00 PM <i>Room 316 on the Main Level</i>	*Workshop 2: Improving Water-Driven Soil Erosion Estimation Systems
1:00 PM – 4:00 PM <i>Room 317 on the Main Level</i>	*Workshop 3: Oxbow Restoration Toolkit Training
4:00 PM – 5:00 PM <i>Room 306 on the Main Level</i>	Student and Early Career Professional Networking
5:00 PM – 6:30 PM <i>Grand Ballroom B on the Upper Level</i>	Local Forum and Flavor Reception

MONDAY, AUGUST 7

7:30 AM – 5:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
7:30 AM – 8:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Coffee and Light Breakfast: Exhibit Hall and Poster Presentations Open
8:30 AM – 10:00 AM <i>Grand Ballroom B on the Upper Level</i>	Conference Kickoff, Keynote Sponsor, and Pritchard Keynote Lecture
10:00 AM – 10:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Break: Exhibit Hall and Poster Presentations Open
10:30 AM – 12:00 PM <i>See pages 29-31</i>	Concurrent Sessions
12:00 PM – 1:15 PM <i>Grand Ballroom B on the Upper Level</i>	*State of the Society Address to the House of Delegates and Regional Sessions (SWCS Members Luncheon) (Additional Fees Apply for Nonmembers and Guests Only)
1:30 PM – 3:00 PM <i>See pages 29-31</i>	Concurrent Sessions
3:00 PM – 3:30 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Afternoon Break: Exhibit Hall and Poster Presentations Open
3:00 PM – 5:00 PM <i>Boardroom 2 on the Mezzanine Level</i>	Association of Retired Conservation Service Employees (ARCSE) Annual Meeting (Partner Event)
3:30 PM – 5:00 PM <i>See pages 29-31</i>	Concurrent Sessions
5:00 PM – 7:00 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Exhibitor and Poster Reception

TUESDAY, AUGUST 8

7:30 AM – 5:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
7:30 AM – 8:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Coffee and Light Breakfast: Exhibit Hall and Poster Presentations Open
8:30 AM – 10:00 AM <i>Grand Ballroom B on the Upper Level</i>	Opening Remarks and Plenary Session
10:00 AM – 10:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Break: Exhibit Hall and Poster Presentations Open
10:30 AM – 12:00 PM <i>See pages 36-38</i>	Concurrent Sessions
12:00 PM – 1:15 PM <i>Grand Ballroom B on the Upper Level</i>	Awards Luncheon and Reflections from 2023 Hugh Hammond Bennett Award Winner
1:30 PM – 3:00 PM <i>See pages 36-38</i>	Concurrent Sessions
3:00 PM – 3:30 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Afternoon Break: Exhibit Hall and Poster Presentations Open
3:30 PM – 5:00 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Exhibit and Poster Tear Down
3:30 PM – 5:00 PM <i>See pages 36-38</i>	Concurrent Sessions
5:00 PM – 6:30 PM <i>Boardroom 2 on the Mezzanine Level</i>	Women in NRCS (WiN) Annual Meeting (Partner Event)

WEDNESDAY, AUGUST 9

7:30 AM – 12:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
7:30 AM – 8:30 AM <i>Grand Concourse on the Main Level</i>	Morning Coffee and Light Breakfast
8:00 AM – 4:00 PM <i>Meet at Memorial Hall on the Main Level at 7:40 AM</i>	*Tour 1: Voyage through Town, Country, and History
8:30 AM – 10:00 AM <i>See pages 41-42</i>	Concurrent Sessions
10:00 AM – 10:30 AM <i>Grand Concourse on the Main Level</i>	Morning Break
10:30 AM – 12:00 PM <i>See pages 41-42</i>	Concurrent Sessions
12:00 PM	Conference Adjourns
1:00 PM – 5:00 PM <i>Meet at Memorial Hall on the Main Level at 12:40 PM</i>	*Tour 2: Generational Women in Agriculture Tour
1:00 PM – 5:00 PM <i>Meet at Memorial Hall on the Main Level at 12:40 PM</i>	*Tour 3: Downtown Des Moines Walking Tour

WEEK OF AUGUST 28

Virtual Resource Platform Opens**

*Not included in conference registration.
Additional cost required to attend.

**Only included with full conference registration.

PROGRAM PLANNING COMMITTEE CHAIR MESSAGE

Welcome to the 78th International Annual Conference of the Soil and Water Conservation Society (SWCS). The focus of this year's meeting is on "Healthy Land, Clean Water: Cultivating a Legacy of Conservation." This theme challenges us to envision not only the world we'd like to live in, but also the world we'd like to leave for next generation. Since the devastating ecological disaster of the Dust Bowl in the 1930s, soil and water conservation is becoming an active, ongoing challenge that requires multidiscipline and multi-institute collaborations to adopt science-based conservation practices, use cutting-edge monitoring technology, and engage a new era of policy. These solutions are necessary to achieve the common goals of healthier soils, cleaner water, and proper wildlife habitat. The conference highlights collective efforts to protect and sustain our soil and water resources in a time of increasing population growth and urbanization, resource scarcity, and climate changes.

We are honored to be welcomed to Iowa for this year's conference. Iowa was the first state to pass a soil erosion prevention law in 1939, which declared the policy for soil and water conservation and promoted public health. Iowa is also a national leader in the implementation of water quality and watershed projects, soil conservation, and buffer programs, with more than 600,000 acres and more than 60 active watershed and water quality projects across the state.

The SWCS annual conference begins Sunday, August 6, with half-day workshops:

- Agricultural Conservation Planning Framework (ACPF) Watershed Applications Training
- Improving Water-Driven Soil Erosion Estimation Systems
- Oxbow Restoration Toolkit Training

On Monday, August 7, do not miss the conference kickoff, including keynote sponsor Syngenta and the Pritchard keynote presentation. Throughout the conference, symposia, oral presentations, and poster presentations will address many topics regarding soil and water conservation; soil health; economics; and outreach, education, and community engagements. Additionally, this year conference will also include three specialty training tracks:

- Cultivating Conservation Technical Assistance, Community, and Networks
- Climate-Smart Agriculture
- Edge-of-Field Practices and Monitoring

This conference is only made possible by SWCS staff, member volunteers, and sponsors who have volunteered their time and talents. Special thanks to members of the Iowa Chapter for hosting this meeting. I want to extend my personal thanks to all who have helped make this a successful conference and wish Heidi Ackerman all the best as she assumes the chair for the 79th annual conference next year.



We hope you enjoy your time at the conference and keep in mind that successful conservation requires everyone's efforts. Even small involvement can make an impact. After all, to quote Mahatma Gandhi, "You must be the change you wish to see in the world."

Maysoon Mikha, 2023 Program Planning Committee Chair

Research Soil Scientist

USDA ARS, Central Great Plains Research Station

WELCOME TO IOWA

After originally attempting to host the annual conference back in 2020, the Iowa Chapter of the Soil and Water Conservation Society gladly welcomes you in-person to Des Moines for the 78th SWCS International Annual Conference. Being nimble and creative is a hallmark of any great conservationist and exemplified by the tenacity of SWCS transitioning in a short time from in-person to virtual for the 2020 and 2021 conferences. Not only was it one of the first national conservation conferences to undertake this but also one of the most successful in implementation, thanks to the dedicated planning team.

The State of Iowa spans 36 million acres here in the heart of the Midwest. Water is integral in our state and defines our eastern and western borders with the mighty Mississippi River and the Missouri River, respectively. Molded by effects of two glaciation periods, Iowa is comprised of eight distinct landform regions, leading to diversity in the land use. For thousands of years, tallgrass prairie covered a majority of the state, providing us with some of the most productive soils in the world. Approximately 85% of the land is currently used for agricultural production. These 30.5 million acres are managed by some 84,900 farm operations. Iowa leads the nation in corn production and is second in soybean production. On the livestock side, we are the highest producer of eggs and hogs. Sustainability is also a cornerstone of our state, with Iowa ranking second in wind energy installed capacity, generating enough electricity to power more than 4 million average American homes.

The year 2023 is a pertinent year in our state to host this conference, marking the anniversary of a couple impactful events. On a somber note, it was 15 years ago that devastating floods affected many communities throughout Iowa with over one billion dollars in estimated property damage and an additional four billion dollars statewide in crop damage. Tackling adversity and utilizing it as a call to action is what we do here in Iowa. This is best demonstrated by concerted partnership efforts throughout the state to address water quality and flood mitigation efforts. These partnerships involve communities that reach outside of their city limits to work with neighbors upstream and downstream, forming strong collaborations between counties, municipalities, farmers, and landowners. Starting in 2010, Watershed Management Authorities (WMAs) became a mechanism for cities, counties, Soil and Water Conservation Districts, and stakeholders to cooperatively engage in watershed planning and management endeavors. Currently with 28 WMAs formed, almost 40% of the state is engaged in these efforts.

This year also marks the 10-year anniversary of the Iowa Nutrient Reduction Strategy kickoff. While we have much to celebrate in the last decade of accomplishments in both conservation implementation and water quality improvement, we conservationists know that the job is not done and there are still many opportunities on the horizon. These two milestones demonstrate the resilience of Iowans in the face of adversity as well as the thriving partnerships that have resulted. “Iowa nice” is indeed more than just a phrase here.



The SWCS national organization and Iowa Chapter have worked hard to pull together an extensive assortment of educational opportunities, social events, and engaging activities. We are thrilled to host you here and hope you enjoy the hospitality, sights, and opportunities of our state capital.

Josh Balk, President, Iowa Chapter

Watershed and Source Water Coordinator, Iowa Department of Natural Resources

CONFERENCE VOLUNTEERS

Thank you to all who assisted in planning the 78th SWCS International Annual Conference!

ANNUAL CONFERENCE PROGRAM PLANNING COMMITTEE

Maysoon Mikha, USDA ARS
Chair

Heidi Ackerman, Iowa State University
Incoming Chair

Courtney Allen, SWCS
Event and Professional Development Director/Executive Assistant to the CEO

Renee Bouldin, SWCS
Chapter and Community Builder

Cheryl Simmons, USDA NRCS
International Committee Liaison

Gretchen Sassenrath, Kansas State University
JSWC Editorial Board Liaison

Rebecca Fletcher, Retired
Professional and Chapter Development Committee Liaison

Francisco Arriaga, University of Wisconsin-Madison
Soil Science Society of America Liaison

TECHNICAL TEAM LEADERS

Maysoon Mikha, USDA ARS
Adaptive Management of Conservation Efforts

Heidi Ackerman, Iowa State University
Outreach, Education, and Community Engagement

Lexi Clark, Sustainable Agriculture Initiative Platform
*Climate-Smart Agriculture
Conservation Economics and Policy*

Skye Wills, USDA NRCS
*Conservation Models, Tools, and Technologies
Edge-of-Field Practices and Monitoring*

Rachel Schattman, University of Maine
Conservation in Organic, Specialty, Small-Scale, or Urban Agriculture

Adam Reimer, National Wildlife Federation
*Cultivating Conservation Technical Assistance,
Community, and Networks
Social Sciences Informing Conservation*

DeAnn Presley and **Peter Tomlinson**, Kansas State University
Soil Health Resources, Indicators, Assessment, and Management

Katie Flahive, US Environmental Protection Agency
Water Resources Assessment and Management

SWCS IOWA CHAPTER LIAISONS

Josh Balk, President, Iowa Department of Natural Resources

Jerry Neppel, President Elect, Iowa Department of Agriculture and Land Stewardship

Mary Beth Stevenson, Past President, City of Cedar Rapids

Greg Townley, Secretary, USDA NRCS

Anna Golightly, Treasurer, Iowa Department of Agriculture and Land Stewardship

Heidi Ackerman, Central Area Chair, Iowa State University

Helen Leavenworth, Northeast Area Chair, USDA NRCS

Dan Paulsen, Northwest Area Chair, USDA NRCS

Anshu Singh, Southeast Area Chair, Western Illinois University

Jon Tesdell, Southwest Area Chair, USDA NRCS

Clare Lindahl, Membership Chair, SWCS

Additional Planning Committee Members:

Steve Konrady (Iowa Department of Natural Resources),
Keegan Kult (Ag Drainage Management Coalition), and
Jonathan Swanson (Polk County Public Works)

2023 STUDENT MODERATORS

Maria Batool, North Dakota State University

Bryce Bearson, Cottey College

Patricia Marie Cordero-Irizarry, Mississippi State University

Cesar Guareschi, Kansas State University

Emad Mady, University of Massachusetts, Amherst

Ravi Teja Kumar Reddy Neelipally, University of Tennessee

Gustavo Roa Acosta, Kansas State University

Lauren Stanton, Kansas State University

Justin Walker, Tennessee State University

SWCS BOARD OF DIRECTORS, OFFICERS, AND STAFF

OFFICERS

Chair: Rebecca Power
Vice-Chair: Chris Hartley
Secretary: Jason Weller
Treasurer: Steve Kadas

NORTHEAST REGION

Christopher Hartley 2021–2023
2023–2026

NORTH CENTRAL REGION

Roger Wolf 2022–2024

NORTHWEST REGION

Keith Berns 2020–2023
2023–2026

SOUTHEAST REGION

Amanda Gumbert 2022–2025

SOUTHWEST REGION

Steve Kadas 2022–2025

AT-LARGE

Ellen Gilinsky 2020–2023
2023–2026
Jerry Hatfield 2020–2023
2023–2026
Rebecca Power 2021–2024
Jason Weller 2020–2023
Incoming: Leonard Jordan 2023–2026

SWCS HEADQUARTERS STAFF

Clare Lindahl, *CEO*
Courtney Allen, *Event and Professional Development Director/Executive Assistant to the CEO*
Annie Binder, *Director of Publications/Editor*
Renee Bouldin, *Chapter and Community Builder*
Erika Crady, *Membership Director*
Emma Harper, *Communications Coordinator*
Joe Otto, *Special Projects and Partnerships Director/Historian*
Jody Thompson, *Editorial Assistant*
Sarah Wright, *Student Summer Intern*

Our goals for the world's soil, water, and other natural resources cannot be realized without justice, equity, diversity, and inclusion.

The Soil and Water Conservation Society denounces the systemic racism, discrimination, and inequality that exist today. Racism, discrimination, and inequality of any kind go against SWCS's core values, which include respect for people and cultures, and the unification of people with diverse backgrounds, experiences, and ideas. SWCS seeks diverse voices, actively listens, engages in dialogue, thinks critically, and takes meaningful action toward creating institutions and systems that serve and value people equally. We expect justice, equity, diversity, and inclusion to be a component of all projects.

CONFERENCE REGISTRATION AND FACILITY INFORMATION

The SWCS registration desk is located in Memorial Hall on the Main Level. SWCS staff will be on site to assist you.

REGISTRATION HOURS

Sunday	11:00 AM – 5:00 PM
Monday	7:30 AM – 5:00 PM
Tuesday	7:30 AM – 5:00 PM
Wednesday	7:30 AM – 12:00 PM

CONFERENCE ADMISSION

The conference registration fee covers one participant. All registered attendees will receive a registration packet, which contains a formal name badge and tickets for purchased events.

Your name badge acts as your admission ticket to educational sessions, including the plenary sessions, exhibits, posters, and special events. Please be sure your name badge is worn at all times in the conference area. For your safety, it is recommended that you do not wear your name badge outside the conference area. Please note that tickets may be collected for ticketed events.

Formal name badges are not provided for guests. Additional tickets for guests to attend the Local Forum and Flavor Reception, Exhibitor and Poster Reception, State of the Society Address to the House of Delegates and Regional Sessions Luncheon, Awards Luncheon, and Conservation Tours may be purchased at the registration desk and are subject to availability.

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.

COVID-19 POLICY

Please note any interaction with the general public poses a risk of being exposed to COVID-19, and we cannot guarantee that you will not be exposed while in attendance at the event. To help promote the health and safety of others, please do not attend the conference if you are experiencing COVID-19 symptoms or you have recently been

exposed to COVID-19. The event will follow the Des Moines public health guidelines, which can be found [here](#). As of now, no public health orders are currently in effect in Des Moines. Face coverings are still highly recommended for those who are immunocompromised and those who are unvaccinated or not fully vaccinated or boosted. Face coverings provide an added layer of protection for those who are fully vaccinated and boosted. We will inform attendees if any changes occur prior to the event. By attending the conference, you knowingly and freely accept the risks associated with COVID-19.

INTERNET

Select the “**SWCSAnnualConference**” network, enter “**SWCS@2023!**” as the password when prompted, and complete the required steps to connect to the free internet connection.

LOST AND FOUND

Check with the registration desk.

NAME BADGE RECYCLING

If you wish to recycle your name badge, please return it to the registration desk at the end of the conference.

PHOTO RELEASE

Registration and attendance at, or participation in, SWCS events constitutes an agreement by the attendee for SWCS to use the attendee’s likeness (all photos, videos, or digital media) in any format without payment or other consideration. SWCS may use the images for nonprofit educational, informational, or promotional purposes. SWCS will not sell the rights to the images or likeness to any other entity.

CEUS

SWCS has worked to secure continuing education credits (CEUs) from various certifying organizations. The room moderators in each session will have a sheet for you to sign in and out with your name and certification number.

EVENT APP INFORMATION

Download the SWCS event app for access to customize your own agenda, view the conference program and abstract book, to receive live conference announcements, view FAQ, participate in the event game, vote in the photo contest, and more!

DOWNLOAD THE EVENT APP

- Download the official SWCS event app for iOS or Android by searching for SWCS in the app store.
- Once the app is installed, enter the email address you used to register.
- Create or enter your password. Select “forgot password” to reset if needed.
- Under “Current & Upcoming Events,” select “78th SWCS International Annual Conference.”

CREATE YOUR PERSONAL PROFILE

Once you have joined the event app, create an eye-catching personal profile that will put you in touch with other conference participants! Note that the creation of your personal profile is required in order for attendees to connect with you.

Go to the **Me** icon within the online platform to start creating your profile. We recommend that your profile include the following:

- Profile Picture
- Title
- Company
- Summary
- Location
- Social Accounts

SET UP YOUR PERSONAL AGENDA

Create your personalized agenda to keep track of the sessions you want to attend!

- Go to the **Agenda** tab within the online platform.
- Select the “+” sign next to the session you want to attend.
- Once all sessions are selected, go to the “My Agenda” section to see your full list of sessions to attend.

CONNECT WITH OTHER ATTENDEES

Once you have created your personal profile, start connecting with attendees!

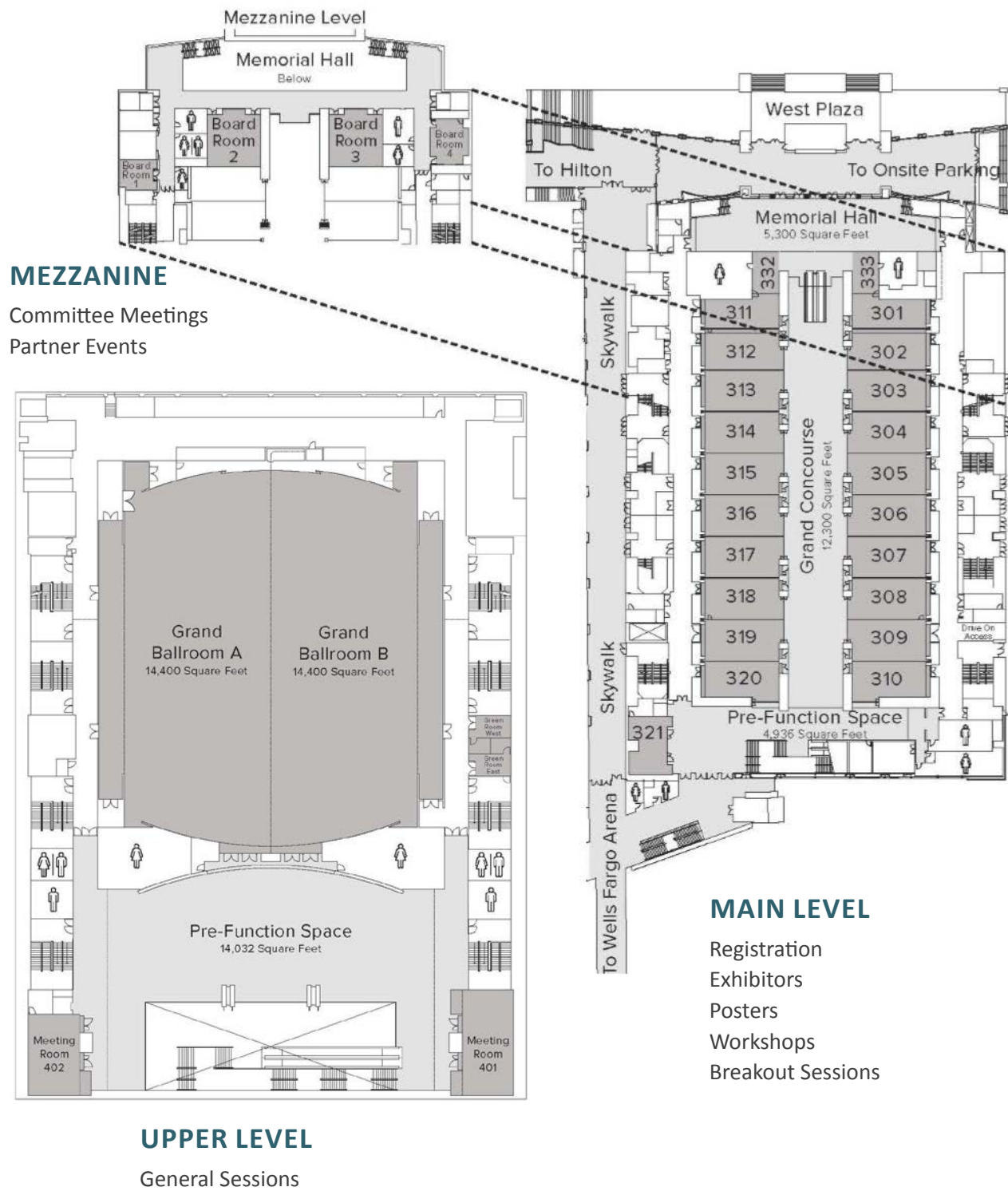
Go to the **Attendees** tab within the online platform and select “Add” for those you are looking to connect with. You may select “Contact” and message the attendee if they have not created their personal profile. Once the connection has been made, you will have the ability to message with the individual. Use this opportunity to schedule a time to get together in person!

PARTICIPATE THROUGHOUT THE EVENT

Go to the **Event Game** tab within the event app for instructions on participating in the event game for your chance to win a prize.

Go to the **Photo Contest** tab within the event app for instructions on voting for this year’s People’s Choice photo contest winner.

MEETING SPACE MAP



CORPORATE PARTNERS

SWCS is pleased to have the following organizations as Corporate Partners in the effort to advance soil, water, and related natural resource conservation to achieve sustainability.

PLATINUM PARTNERS



GOLD PARTNERS



SILVER PARTNER



BRONZE PARTNERS



Are you interested in having your organization recognized for its dedication to natural resources protection and sustainability? Contact Clare Lindahl through the event app or at clare.lindahl@swcs.org to discuss all the benefits of becoming an SWCS Corporate Partner.

CONFERENCE SPONSORS

Thank you to our 78th SWCS International Annual Conference sponsors! Please visit this year's conference sponsors in the exhibit hall, and also check out their sponsor pages in the **Sponsors** tab of the event app.

PRESENTING SPONSOR



PLATINUM SPONSORS



Agricultural Research Service
U.S. DEPARTMENT OF AGRICULTURE



United States
Department of
Agriculture

Natural Resources Conservation Service

TECHNOLOGY SPONSOR



GOLD SPONSOR



SILVER SPONSOR



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Environmental Protection
Agency



STUDENT LEADER DEVELOPMENT SPONSOR



Association Of Retired Conservation
Service Employees



United States Department of Agriculture

Natural Resources Conservation Service

We deliver conservation solutions so agricultural producers can protect natural resources and feed a growing world.



**Contact your local NRCS office to discuss conservation planning
and financial assistance options for your farm.**

Natural Resources Conservation Service

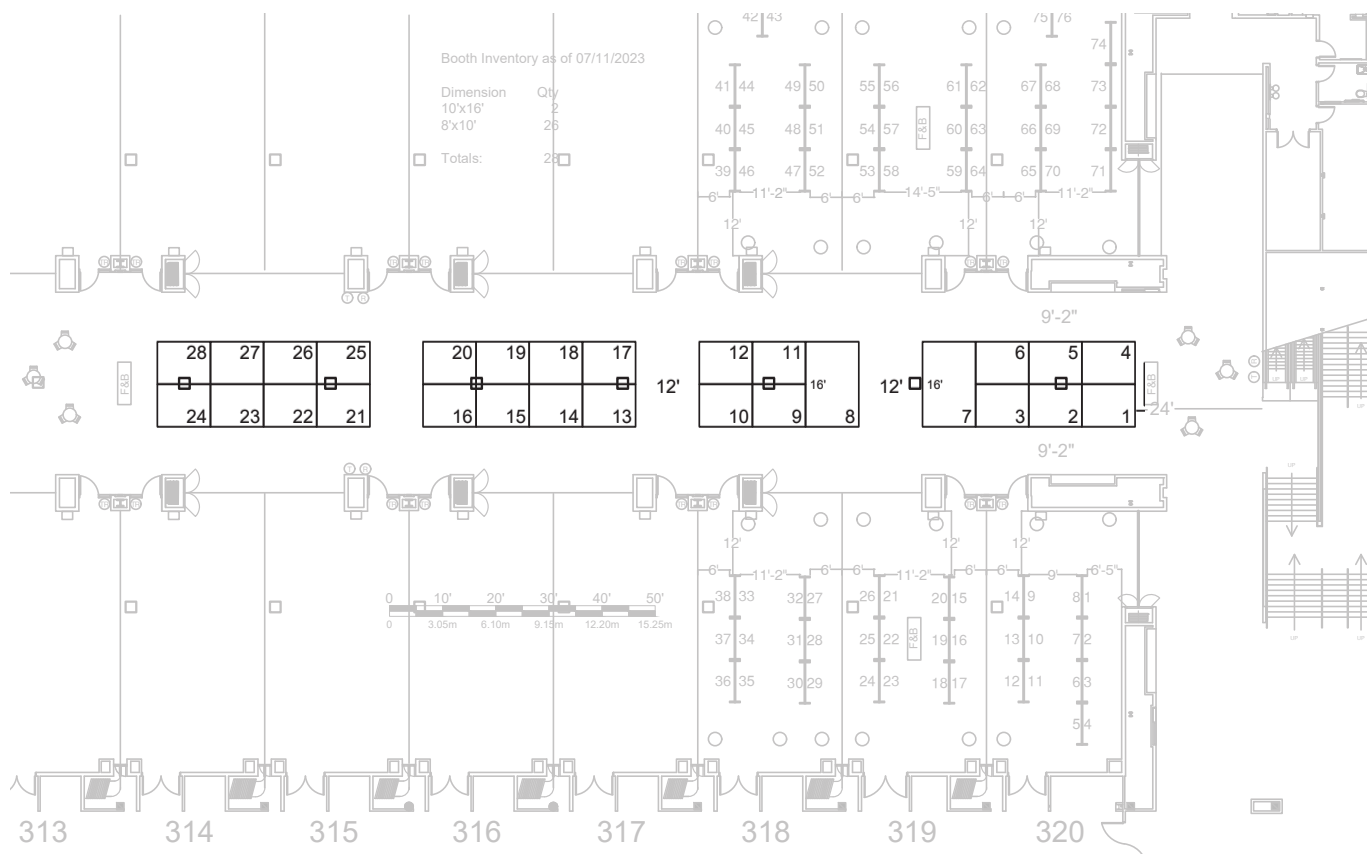
www.nrcs.usda.gov/ia

@IowaNRCS



USDA is an equal opportunity provider, employer and lender.

EXHIBIT HALL LAYOUT



Booth # Exhibitor

1	ADM
2	Agri Drain
3	Hickenbottom
4	USDA ARS
5	USDA Climate Hubs
6	USDA Natural Resources Conservation Service
7	Soil and Water Conservation Society
8	Syngenta
9	Association of Retired Conservation Service Employees
10	Women in NRCS (WiN)
11	US Environmental Protection Agency
12	ISG
13	People's Company
14	Green Cover Seed

Booth # Exhibitor

15	Midwest Cover Crops Council
16	Sand County Foundation
17	American Farmland Trust
18	Truterra
19	The Nature Conservancy
20	National Association of Conservation Districts
21	Black Earth
22	Direct Contact Inc.
23	Truax Company
24	Voss Signs
25	State Revolving Fund/Iowa Department of Agriculture and Land Stewardship
26	Iowa Soybean Association
27	Agriculture Clean Water Alliance (ACWA)
28	Iowa Water Center

EXHIBITORS

Booth	Exhibitor	Representative	Booth	Exhibitor	Representative
1	ADM adm.com	Theo Gunther Theodore.Gunther@adm.com	15	Midwest Cover Crops Council midwestcovercrops.org	Anna Morrow annamorrow@purdue.edu
2	Agri Drain agridrain.com	Stacy Richter stacy@agridrain.com	16	Sand County Foundation sandcountyfoundation.org	Craig Ficenec cficenec@sandcountyfoundation.org
3	Hickenbottom hickenbottominc.com	Michaela VanHooser michaelavanhooser@gmail.com	17	American Farmland Trust farmland.org	Kathryn Pagura kpagura@farmland.org
4	USDA ARS ars.usda.gov	Teferi Tsegaye teferi.tsegaye@usda.gov	18	Truterra truterraag.com	Maddie Kaye mkaye@landolakes.com
5	USDA Climate Hubs climatehubs.usda.gov	Laurie Nowatzke laurie.nowatzke@usda.gov	19	The Nature Conservancy nature.org	Dayana Caero dayana.caero@tnc.org
6	USDA Natural Resources Conservation Service nrcs.usda.gov	Jason Johnson jason.r.johnson@usda.gov	20	National Association of Conservation Districts nacdn.org	Meg Leader meg-leader@nacdn.org
7	Soil and Water Conservation Society swcs.org	Clare Lindahl clare.lindahl@swcs.org	21	Black Earth blackearth.com	Michael Erdman merdman@blackearth.com
8	Syngenta syngenta-us.com	Caydee Savinelli caydee.savinelli@syngenta.com	22	Direct Contact Inc. directcontact.com	Cassie Tatum cassie_tatum@directcontact.com
9	Association of Retired Conservation Service Employees arcse.org	Jack Carlson pspicata@gmail.com	23	Truax Company truaxcomp.com	Steve Clubine truax1@qwestoffice.net
10	Women in NRCS (WiN) winnrcs.org	Jessica Rock Jessica.Rock@usda.gov	24	Voss Signs vosssigns.com	Tom Tenerovicz tom@vosssigns.com
11	US Environmental Protection Agency epa.gov/nps	Katie Flahive flahive.katie@epa.gov	25	State Revolving Fund/Iowa Department of Agriculture and Land Stewardship iowaagriculture.gov	Derek Namanny derek.namanny@iowaagriculture.gov
12	ISG isginc.com	Chuck Brandel Chuck.brandel@isginc.com	26	Iowa Soybean Association iasoybeans.com	Kristen Dearden kdearden@iasoybeans.com
13	People's Company peoplescompany.com	Joe Orstad joe.orstad@peoplescompany.com	27	Agriculture Clean Water Alliance (ACWA) acwaiowa.com	Kristen Dearden kristen@acwaiowa.com
14	Green Cover Seed greencover.com	Keith Berns keith@greencoverseed.com	28	Iowa Water Center iowawatercenter.org	Laura Frescoln frescoln@iastate.edu

POSTER PRESENTATIONS

ADAPTIVE MANAGEMENT OF CONSERVATION EFFORTS

1. Effect of No-Tillage, Cover Crop, and Biochar Application on Net Global Warming Potential in Asian Organic Soybean Production
2. Evaluating Soil Erosion and Runoff Dynamics in a Humid Subtropic, Low Stream Order, Southern Plains Watershed from Cultivation and Solar Farm Development
3. If We Know Groundwater Is a Limited Resource that Must Be Managed, Why Are Water Tables in Texas Continuing to Decline?
4. Nitrate Leaching and Crop Yield for Intermediate Wheatgrass (Kernza®) in the US Midwest

CEAP SHOWCASE

5. A Modeling Assessment of Agricultural Land Groundwater Recharge in the Kaweah River Watershed, California
6. Assessing Conservation Practice Impacts on Reducing Soil Loss from Ephemeral Gullies within CEAP Watersheds
7. Assessing the Field and Watershed Scale Impacts of Conservation Practices in the Blanchard River Watershed
8. Conservation Effects Assessment Project in Northeast Arkansas
9. Discerning and Mitigating Legacy Nitrogen Sources in CEAP Watersheds through Measurement and Modeling
10. Effective Conservation Practices for the Southeastern United States
11. Evaluating Conservation Practice Effects at the Watershed- and Field-Scales in the Lake Champlain Basin of Vermont
12. Examining the Prospects for Short-Range Runoff Forecasting in the Mahantango Creek Watershed Using a National Weather Service Hydrologic Model
13. Impacts of Conservation Practice Implementation on Water Quality, Soil Quality, and Stream Ecology in Ohio
14. Mitigation of Excess Legacy Soil Nutrients on the Delmarva Peninsula Using Perennial Grasses

15. National Food and Agriculture (NIFA) CEAP Watershed Synthesis Study: Lessons Learned Still Informing Effective Conservation
16. Nutrient Dynamics after Simulated Flooding of Soils and Sediments from Conservation and Agricultural Land Uses in Beasley Lake Watershed, a CEAP Watershed in the Mississippi Alluvial Plain
17. Reducing Sediment and Phosphorus Losses in a Small Watershed by Converting from Surface to Sprinkler Irrigation
18. Saturated Riparian Buffers as Promising Edge-Of-Field Conservation Practice
19. Significant Findings from the CEAP Goodwin Creek Experimental Watershed
20. Sugarcane and Flooded Rice Crop Rotation Effects on Soil and Water Quality within the Everglades Agricultural Area
21. The Agricultural Conservation Planning Framework (ACPF) Enhancement Project
22. Watershed Legacy Sediment Assessment

CIG SHOWCASE

23. An Innovative Approach for Invasive Species Targeting and Control Using Remotely Sensed Data and Techniques within the Chickasaw Nation Treaty Territory
24. An Internet of Things (IoT) System to Monitor Soil Moisture and Improve Irrigation Water Management
25. Biocarbon-Driven Dairy Manure Management Demonstration for Enhanced Water Quality
26. Carolina Cotton Can Conserve Soil with Cover Crops
27. Conservation at the Co-op
28. Demonstration of the Benefits of Subirrigation Using Water Level Control Structures for Improved Agricultural Irrigation Water Use
29. Evaluation of Environmental Benefits of Dairy Manure Treatment Technologies for Improving Water Quality
30. Farmer-Driven Implementation of Soil Health Management Systems Adapted to Diverse Cropping Systems in Tropical and Subtropical Island Environments
31. High Clearance Robotic Irrigation for In-Season Nutrient Management

32. Impacts of Biochar and Manure Amendments on Soil Health and Water Dynamics in Cover Cropping Systems, South Dakota
33. Low-Tech Process Based In-Stream Structures to Increase Climate Resiliency in the Great Plains
34. Novel Investment in Grazing Infrastructure
35. Promoting Adoption of Precision Nitrogen Management Technologies through On-Farm Research
36. Stewardship Ambassadors: Women Landowners Educating Farmers and Other Landowners to Motivate Conservation Change
37. Using 3D Imaging to Estimate Cover Crop Biomass and Characterize Canopy Structure
38. Western Lake Erie Basin: Manure Nutrient Recovery



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CLIMATE-SMART AGRICULTURE

39. Converting Runoff to Irrigation: Assessing the Feasibility of Rainwater Harvesting for Horticulture Production across the Continental United States
40. Developing Irrigation Scheduling Strategies for Drainage Water Recycling Systems in Iowa
41. Impact of Land Use Systems on Soil Aggregates and Associated Organic Carbon Fractions: Analysis of Time-Variable Management Systems in New Jersey Piedmont Soils
42. Integrating Manure Management with Sustainable Intensification of No-Till Corn Silage Systems for Improving Soil Health

CONSERVATION IN ORGANIC, SPECIALTY, SMALL-SCALE, OR URBAN AGRICULTURE

43. Biochar Boosts the Compost Performance of Methane Fermentation Residue Derived from Food Waste

CONSERVATION MODELS, TOOLS, AND TECHNOLOGIES

44. Assessment of Water Quality under Sensor-Based Irrigation Scheduling System in South Carolina
45. Dust Mitigation through Sustainable and Resilient Cropping Systems
46. Improving Surface Drainage Descriptions for Estimation of Soil Erosion over Large Areas

EDGE-OF-FIELD PRACTICES AND MONITORING

47. Assessment of Soil Health Practice Impacts on Runoff and Curve Number Hydrology
48. Bioreactor and Saturated Buffer Stacked Practice in Missouri
49. Effect of Cover Crops on Water Quality of Tile Drained Corn-Soybean Watersheds: A Paired Watershed Approach
50. Microbial Communities as a Pathway to Improved Woodchip Bioreactor Design and Performance
51. Soil Moisture Sensors and Surge Valves to Increase Irrigation Efficiency

OUTREACH, EDUCATION, AND COMMUNITY ENGAGEMENT

52. Assessing the Reliability of Community Science Data Collected by Reservoir Observer Student Scientists (ROSS)
53. Building Knowledge about Wisconsin's Cover Crops: A Farmer Citizen Science Research Project
54. Developing a Metric to Describe Confinement of Prairie Streams
55. Ground Truthing the Accuracy of the Web Soil Survey through Comparison to Soil Cores
56. Observing the Extent of Education and Outreach on the Nutrient Loss Reduction Strategy
57. Rain to Rivers: Connecting Precipitation Observations to Flooding in South Dakota
58. Shell Creek Watershed Monitoring Project: High School Student Volunteer Monitoring
59. The Effectiveness of Different Materials in Livestock Disposal Piles to Minimize Leachate
60. Virtual Great Lakes Water Literacy StoryMap
61. Water in Your Jeans: A Water Footprint Comparison

SOIL HEALTH RESOURCES, INDICATORS, ASSESSMENT, AND MANAGEMENT

62. A Novel Remediation Technology for Oil-Contaminated Soils with Ultra-Fine Bubbles
63. Assessment of Soil Protein as a Soil Health Indicator and Influence of Management Practices
64. Can We Regenerate Our Land and Water Systems using the Perennial Groundcover (PGC) System? An Overview
65. Carbon Dynamics in Three Land Management Systems in the Northern Great Plains
66. Cotton-White Clover Cover Crop Production System Utilization for Macro- and Micro-Nutrient Pools
67. Exploring Soil Health on Dairy Forage Production Fields
68. How Do Cover Crops Affect Soil Biological Properties in a Long-Term, No-Till Rotation in Northeast Kansas?
69. Planting Green: Potential Benefits and Disadvantages of Planting into a Live Cover Crop

70. Salinity Effects on the Threshold Wind Velocity Necessary to Initiate Erosion
71. Seasonal Dynamics and Impact of Phosphorus Fertilizer Treatments and Cover Crops on Soil Health Indicators during Soybean Growing Season
72. The Effects of Manure Applications on Soil Greenhouse Gas Emissions in the Texas High Plains
73. Toward a National Assessment of Soil Biodiversity: A Framework for Biological Data Collection

WATER RESOURCE ASSESSMENT AND MANAGEMENT

74. Nutrient Reduction Capability of Drainage Water Recycling Storage Reservoirs
75. Organic Soil Amendments and Their Effect on Soil Health and Water Holding Capacity
76. Soil Water Dynamics in Semiarid Cotton Conservation Systems



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VISION

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MISSION

ARS delivers scientific solutions to national and global agricultural challenges.

LEADERSHIP

Dr. Simon Liu is the ARS Administrator. Dr. Steven Kappes is the Associate Administrator for National Programs. Joon Park is the Associate Administrator for Research Operations and Management.

RESEARCH AND PARTNERSHIPS

ARS works closely with private, state, and federal stakeholders to develop and organize our research priorities. Our research frequently finds our scientists collaborating with research partners from universities, private companies, and other countries.

BY THE NUMBERS



650 research projects within
15 National Programs



2,000 scientists and post docs



6,000 scientific support employees



90+ research locations, including
4 overseas



\$1.4 billion for research projects funding

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SUNDAY, AUGUST 6

SCHEDULE AND EVENTS

SCHEDULE

9:30 AM – 11:00 AM <i>Off-site at SWCS Headquarters (945 SW Ankeny Road, Ankeny)</i>	SWCS Headquarters Open House
11:00 AM – 5:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
12:00 PM – 5:00 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Exhibit and Poster Set Up
12:00 PM – 12:30 PM <i>Room 306 on the Main Level</i>	New Member and First Timer Orientation
1:00 PM – 4:00 PM <i>Room 307 on the Main Level</i>	*Workshop 1: ACPF Watershed Applications Training
1:00 PM – 4:00 PM <i>Room 316 on the Main Level</i>	*Workshop 2: Improving Water-Driven Soil Erosion Estimation Systems
1:00 PM – 4:00 PM <i>Room 317 on the Main Level</i>	*Workshop 3: Oxbow Restoration Toolkit Training
4:00 PM – 5:00 PM <i>Room 306 on the Main Level</i>	Student and Early Career Professional Networking
5:00 PM – 6:30 PM <i>Grand Ballroom B on the Upper Level</i>	Local Forum and Flavor Reception

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

EVENTS

SWCS Headquarters Open House

9:30 AM – 11:00 AM, Off-site at SWCS Headquarters (945 SW Ankeny Road, Ankeny)

Built in 1963 and funded entirely through member donations, SWCS headquarters houses staff offices, meeting space, and the SWCS archives. It is the oldest nonprofit organization in Ankeny and one of the city's oldest businesses. SWCS headquarters is dedicated to the memory of Hugh Hammond Bennett and is the home of his collection of conservation documents and mementoes. Join us for an open house and tour the SWCS headquarters building and its uniquely mid-century modern architecture. Guests will also see artifacts from the Hugh Hammond Bennett Collection that have never been exhibited to the public.

New Member and First Timer Orientation

12:00 PM – 12:30 PM, Room 306 on the Main Level

New members and conference first timers will have the opportunity to network with one another and discuss the conference and membership with SWCS leadership. The session will highlight professional development opportunities throughout the conference, provide tips for engaging in professional networking, outline benefits of an SWCS membership, and more. Attendees are encouraged to use this time to ask questions about the conference and the Society. Attendance is also encouraged for students and early career professionals.

Workshop 1: ACPF Watershed Applications Training

1:00 PM – 4:00 PM, Room 307 on the Main Level

Instructors: Ann Marcelle Lewandowski, University of Minnesota Water Resources Center; Emily Zimmerman, Iowa State University; Karl Gesch, Wisconsin Department of Natural Resources; Matt Drewitz, Minnesota Pollution Control Agency; Laura Frescoln, Iowa State University; Andy Asell,

Iowa Department of Natural Resources; Janice Kepka, University of Wisconsin-Division of Extension

Note: *This workshop is not designed to teach people to run the ACPF within ArcGIS. GIS specialists wanting to learn to run the ACPF software should review additional training opportunities at www.ACPF4watersheds.org.*

The ACPF (Agricultural Conservation Planning Framework) is a GIS-based application for siting conservation practices within a watershed. Its unique strength is in quickly identifying realistic places to site conservation practices across a watershed. The ACPF outputs are used to prioritize sites and practices and engage stakeholders in collaborative watershed planning processes. For a more detailed description, visit www.ACPF4watersheds.org.

The ACPF Watershed Applications Workshop is designed for watershed planners, SWCD/NRCS staff, extension personnel, and ag and environmental professionals who are interested in learning more about using the ACPF outputs to improve their small watershed-based planning and implementation projects. No GIS or prior ACPF experience is needed. Learners will not run the ACPF toolbox in this workshop.

Participants will learn the basics of what is behind the ACPF tools, examine and discuss multiple case studies of how it has been used in watershed planning, and leave with a fuller understanding of how to use ACPF to improve the effectiveness and efficiency of watershed planning efforts. Registrants will be sent instructions for completing an hour of pre-workshop materials to review before the workshop.

Data to run the ACPF is ready to use for the Midwest and selected other US agricultural areas. Utilities are available to develop input datasets for other parts of the United States. Data sources outside the United States may not be suitable for use with the ACPF.

Learning Outcomes:

1. Recognize the potential impact of a watershed-wide perspective to land conservation work.
2. Recognize ways that ACPF improves the effectiveness and efficiency of conservation and identify ways to use it in your own conservation work.
3. Explain the technical concepts and assumptions behind ACPF outputs in plain language to nontechnical audiences.

4. List the technical and organizational requirements for using the ACPF in order to be able to assess your own organization's readiness to use the ACPF.
5. Prepare to engage staff, clients, and stakeholders in developing, sharing, and interpreting ACPF outputs as part of watershed planning and implementation.

Workshop 2: Improving Water-Driven Soil Erosion Estimation Systems

1:00 PM – 4:00 PM, Room 316 on the Main Level

Instructors: *Rick Cruse, Iowa State University; Teferi Tsegaye, USDA ARS; Thanos Papanicolaou, USDA ARS; Chris Renschler, USDA ARS; Kossi Nauwakpo, USDA ARS; Brian Gelder, Iowa State University; Pete Robichaud, US Forest Service; Erin Brooks, University of Idaho; Dennis Flanagan, USDA ARS; Rob Wells, USDA ARS; Jason Williams, USDA ARS; David Goodrich, USDA ARS; Matt Drewitz, Minnesota Pollution Control Agency; Tom Buman, Ag Consultant; Chris Coreil, USDA NRCS; Shawn Richmond, Iowa Farm Bureau*

Farm-level soil erosion predictions are a basis to allocate billions of dollars of federal farm subsidies annually, yet our methods of estimating this critical value are outdated, can be difficult to interpret, and are challenging to defend. The goals of this workshop are to (1) facilitate a better understanding of these soil erosion estimates associated with on-site agronomic management, ecosystem health, and down-stream communities; (2) to identify limitations of existing models used to quantify soil erosion; and (3) propose model improvements, using data and new technologies, necessary to meet the needs of stakeholders who rely on these estimates on- and off-site. A recently developed USDA ARS vision describing characteristics of a state-of-the-art soil erosion estimation system(s) will be presented, followed by presentations describing five of the most advanced systems in use today. Each presenter will contrast characteristics of existing systems to that identified in the USDA ARS vision for a state-of-the-art system. Multiple stakeholders will present their vision identifying needs related to soil erosion estimation science. Subsequently, a panel composed of researchers and stakeholders will address the question, Is development of new science or improvements in existing modeling systems the better path forward? A discussion with audience participants will subsequently allow a broader set of opinions to

be heard and recorded. This workshop will serve as Phase I of a multiple phase strategy for development of modeling systems that meet the needs of stakeholders while facilitating state-of-the-art soil and water conservation advances.

Workshop 3: Oxbow Restoration Toolkit Training

1:00 PM – 4:00 PM, Room 317 on the Main Level

Instructors: *Brandon Iddings, Iowa Soybean Association; Darrick Weissenfluh, US Fish and Wildlife Service; Karen Wilke, The Nature Conservancy*

The purpose of this workshop is to educate conservation professionals about oxbow restoration as a multipurpose (soil, water, AND wildlife) practice. For this workshop, we will expand upon the details included in the [free Oxbow Restoration Toolkit](#). We recommend that attendees read through the toolkit before the workshop to get the most out of the training. Specifically, we will examine multiple oxbows using online resources and decide, based on specific goals,

whether or not they need restoration and why. We will also work through the design process as it relates to specific restoration goals, including considerations for determining elevations, inclusion of drainage water management, and oxbow-stream connection channels. This workshop will include an exercise for participants to apply knowledge gained from this workshop and will conclude with an engaging and interactive discussion on oxbow restorations. The goal of this workshop is for conservation professionals to leave this conference with the knowledge, tools, and confidence to identify and restore oxbows in their areas.

Student and Early Career Professional Networking

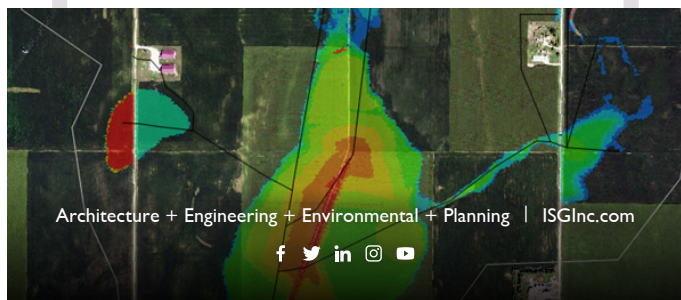
4:00 PM – 5:00 PM, Room 306 on the Main Level

This is a networking opportunity for students and professionals early in their careers to meet and connect with professionals in the field. There will be an opportunity to learn about internship, job, and graduate school opportunities that are available.

Attendance is encouraged for professionals wishing to connect with students. We hope you are able to join us! The early career mixer is graciously sponsored by ISG.



Celebrating 50 years of improving water quality using innovative practices and cutting edge technology.



Local Forum and Flavor Reception

5:00 PM – 6:30 PM, Grand Ballroom B on the Upper Level

The Local Forum and Flavor Reception will be opened by SWCS North Central Region Director Roger Wolf. Spend time networking with colleagues and viewing the mobile trailers and other conservation art following “The Art of Conservation” presentation. This year’s conference reception will include a selection of themed appetizers highlighting the local flavor of Iowa, along with a cash bar.

Presenter: *Jackie Comito, Iowa State University*

SWCS’s mission is to foster the science and **art** of natural resource conservation. An Iowan and SWCS member, Jackie Comito will share with attendees how she tackles conservation work with creativity, mixing unique approaches to extension and outreach with a true passion for improving the health of Iowa’s environment.

While her formal title at Iowa State University is program director, two words are not nearly enough to describe the many hats worn by Comito. She is an artist, anthropologist, grant writer, educator, musician, fearless leader, collaborator, evaluator, videographer, and passionate advocate for healthy water and soil. (She is also a member of SWCS!)

Learn how Comito uses art to spark creativity in herself and those around her and be inspired to bring awe, wonderment, and imagination into your conservation work. Attendees will have the opportunity to view the Iowa Learning Farms' award-winning, state-of-the-art trailers, which utilize art and demonstrations to engage and educate all ages on the value of conservation on the land.

Comito's keystone projects include Iowa Learning Farms and Water Rocks! Established in 2004, Iowa Learning Farms is building a culture of conservation by encouraging the adoption of conservation practices. Farmers, landowners, researchers, and the Iowa Learning Farms team work together to identify and implement best management practices that improve water quality and soil health while remaining profitable. Based on campus at Iowa State University, Iowa Learning Farms has a statewide network of farmer partners to serve as local contacts and resources to farmers and landowners in their area. Through field days and workshops held across the state, as well as virtual offerings of field days and weekly webinars, Iowa Learning Farms strives to offer access to current conservation, water quality, and soil health information. Iowa Learning Farms has helped expand conservation in Iowa and helped change the conversation around these issues. They have hosted 312 in-person farmer field days and workshops with 15,320 participants. When the pandemic pushed them to change things, they created a virtual field day format and have now hosted 39 events with nearly 3,000 participants and over 15,000 archive views. They also have a highly successful weekly webinar series: 270 webinars, 19,000+ participants, and 50,000+ archive views.

Water Rocks! has engaged with more than 175,000 students through visits to 94% of Iowa's school districts. Water Rocks! is an award-winning statewide youth water education program that fosters the interplay of knowledge, caring, and engagement among Iowa's youth that can lead to long-term multigenerational

transformation of all Iowans. Through a combination of STEM (science, technology, engineering, and mathematics) and the arts, Water Rocks! challenges and inspires all Iowans towards a greater appreciation of our water resources. Water Rocks! celebrated 10 years in 2022 with an Earth Day poetry slam and the premiere of Water Rocks! The Musical.



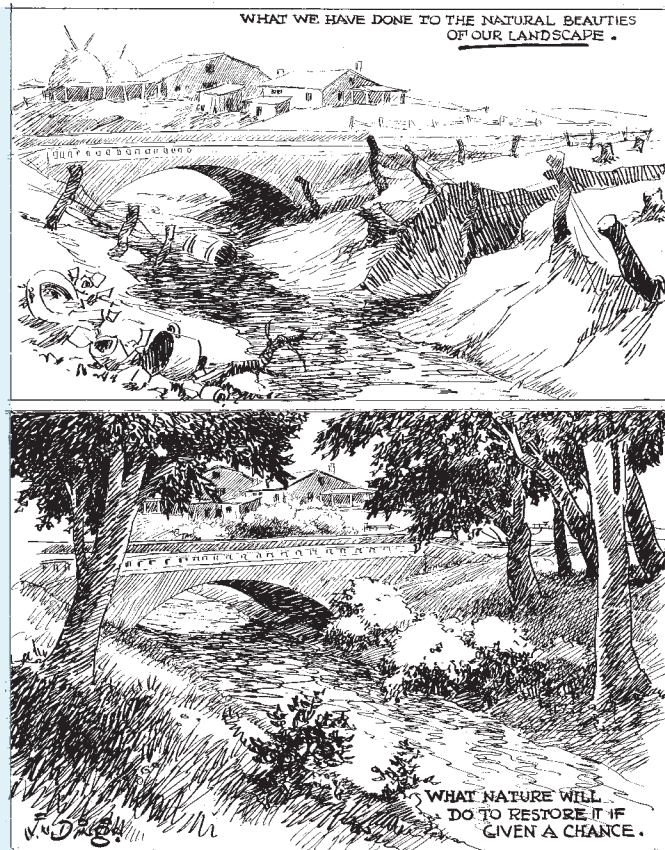
Jackie Comito teaching at the Iowa State Fair with one of four Conservation Station mobile learning units that travel around the state attending a variety of community events including county fairs. Through collaboration with Iowa artists, the trailer exterior artwork depicts Iowa's natural world. The Conservation Stations were recently awarded a national Conservation Innovation Award from SWCS. Since they were introduced in 2007, the Conservation Station fleet has made 957 appearances engaging some 121,000 people.



The Jay N. Darling Legacy Center, which supports the establishment and work of the Jay N. Darling Institute at Drake University in Des Moines, Iowa, will provide items from their special collection.

Jay N. Darling (1876 to 1962) is one of the most influential Iowans of the 20th century conservation movement. He was a two-time Pulitzer Prize-winning editorial cartoonist, writer, sportsman, Duck Stamp artist, world traveler, conservation activist, National Wildlife Federation founder, National Wildlife Refuge System developer and advocate, musician, Cooperative Research Program founder, and more!

Drake University in Des Moines and the Jay N. Darling Institute will also host the 2023 Federal Migratory Bird Hunting and Conservation Stamp Art Contest on September 15 to 16, 2023.



"What we have done to the natural beauties of our landscape," Ding Darling Papers, Special Collections and Archives, The University of Iowa Libraries. "Ding" Darling Wildlife Society owns the copyright of "Ding" Darling cartoons. Used with permission.

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- **Grow** your professional network
- **Increase** your visibility within the conservation profession
- **Unlock** access to high-quality educational opportunities, training, and technical resources, including continuing education credits
- **Connect** with members of your local chapter



SUNDAY, AUGUST 6, 2023			
9:30 AM - 11:00 AM	SWCS Headquarters Open House		Offsite at SWCS Headquarters (945 SW Ankeny Road, Ankeny)
11:00 AM - 5:00 PM	Registration Desk Open		Main Level Memorial Hall
12:00 PM - 5:00 PM	Exhibit and Poster Set Up		Main Level Grand Concourse Rooms 308-310 & 318-320
12:00 PM - 12:30 PM	New Member and First Timer Orientation		Main Level Room 306
1:00 PM - 4:00 PM	WORKSHOPS		
Main Level Room 307	Workshop 1: ACPF Watershed Applications Training - Ann Marcelle Lewandowski, University of Minnesota Water Resources Center; Emily Zimmerman, Iowa State University; Karl Gesch, Wisconsin Department of Natural Resources; Matt Drewitz, Minnesota Pollution Control Agency; Laura Frescoln, Iowa State University; Andy Asell, Iowa Department of Natural Resources; Janice Kepka, University of Wisconsin-Division of Extension (ticket required, additional fees apply)		
Main Level Room 316	Workshop 2: Improving Water-Driven Soil Erosion Estimation Systems - Rick Cruse, Iowa State University; Teferi Tsegaye, USDA ARS; Thanos Papanicolaou, USDA ARS; Chris Renschler, USDA ARS; Kossi Nauwakpo, USDA ARS; Brian Gelder, Iowa State University; Pete Robichaud, US Forest Service; Erin Brooks, University of Idaho; Dennis Flanagan, USDA ARS; Rob Wells, USDA ARS; Jason Williams, USDA ARS; David Goodrich, USDA ARS; Matt Drewitz, Minnesota Pollution Control Agency; Tom Buman, Ag Consultant; Chris Coreil, USDA NRCS; Shawn Richmond, Iowa Farm Bureau (ticket required, additional fees apply)		
Main Level Room 317	Workshop 3: Oxbow Restoration Toolkit Training - Brandon Iddings, Iowa Soybean Association; Darrick Weissenfluh, US Fish and Wildlife Service; Karen Wilke, The Nature Conservancy (ticket required, additional fees apply)		
4:00 PM - 5:00 PM	Student and Early Career Professional Networking		Main Level Room 306
5:00 PM - 6:30 PM	Local Forum and Flavor Reception Opening Remarks - Roger Wolf, Soil and Water Conservation Society North Central Regional Director; The Art of Conservation - Jackie Comito, Iowa State University		Upper Level Grand Ballroom B

MONDAY, AUGUST 7

SCHEDULE AND EVENTS

SCHEDULE

7:30 AM – 5:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
7:30 AM – 8:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Coffee and Light Breakfast: Exhibit Hall and Poster Presentations Open
8:30 AM – 10:00 AM <i>Grand Ballroom B on the Upper Level</i>	Conference Kickoff, Keynote Sponsor, and Pritchard Keynote Lecture
10:00 AM – 10:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Break: Exhibit Hall and Poster Presentations Open
10:30 AM – 12:00 PM <i>See pages 29-31</i>	Concurrent Sessions
12:00 PM – 1:15 PM <i>Grand Ballroom B on the Upper Level</i>	*State of the Society Address to the House of Delegates and Regional Sessions (SWCS Members Luncheon) (Additional Fees Apply for Nonmembers and Guests Only)
1:30 PM – 3:00 PM <i>See pages 29-31</i>	Concurrent Sessions
3:00 PM – 3:30 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Afternoon Break: Exhibit Hall and Poster Presentations Open
3:00 PM – 5:00 PM <i>Boardroom 2 on the Mezzanine Level</i>	Association of Retired Conservation Service Employees (ARCSE) Annual Meeting (Partner Event)
3:30 PM – 5:00 PM <i>See pages 29-31</i>	Concurrent Sessions
5:00 PM – 7:00 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Exhibitor and Poster Reception

EVENTS

Conference Kickoff, Keynote Sponsor, and Pritchard Keynote Lecture

8:30 AM – 10:00 AM, Grand Ballroom B on the Upper Level

The Conference Kickoff will be opened by SWCS CEO Clare Lindahl. This year's keynote sponsor, Tony Burd, Senior Regulatory Stewardship Manager at Syngenta, will address the audience, followed by the Pritchard Keynote Lecture, "Fields of Hope: The Transformative Practices Healing Ecosystems, Producers, and Professionals."

Presenter: *Elizabeth E. Heilman, Wichita State University*

Keynote speaker Elizabeth E. Heilman, Ph.D. will kick off this year's annual conference with the hope in our work as conservation professionals to leave a legacy of healthy land and clean water. She will present research and practical case studies of how producers and professionals are inspiring communities of change toward regenerative agriculture. Hielman will also share applicable tools at our disposal to heal our ecosystems, our communities, and our changing climate. Hielman bridges the social and physical sciences to encourage change across public, private, and academic conservation sectors. She will translate her research and experiences into expertise that conservation professionals from any sector can utilize to advance their own conservation goals.



Elizabeth Heilman is a professor of science education at Wichita State University (previously Purdue and Michigan State) who studies the pathways to regenerative agriculture. Her studies include not only

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

ecologically sound agronomy but also emotional grit, community resilience, and policy action to create new food systems and human flourishing. She is the author of more than 60 book chapters and articles and is the author or editor of six books. She has been recognized through awards such as the American Educational Research Association book of the year, among others, and has served as an elected representative with the National Council for the Social Studies. Heilman farms in Wisconsin and runs cattle in Kansas, while working at Wichita State University.

State of the Society Address to the House of Delegates and Regional Sessions (SWCS Members Luncheon)

12:00 PM – 1:15 PM, Grand Ballroom B on the Upper Level

This opportunity to connect face-to-face with your professional society's staff, board, and leadership only comes once a year, so don't miss out. Over lunch, attendees will receive a briefing on the Society's happenings, which impact the future of the

conservation organization, profession, and movement. Following lunch, exchange ideas, brainstorm advocacy opportunities, and strengthen your local conservation community during regional breakout discussions facilitated by SWCS leadership.

SWCS members will have a ticket to the luncheon in their name badges. There will be an opportunity to join SWCS at registration. A limited number of tickets will be available for purchase at registration prior to the luncheon for new and potential members.

View the State of the Society and Regional Session Agenda in the event app, or at www.swcs.org/23ACSOS.

Association of Retired Conservation Service Employees (ARCSE) Annual Meeting (Partner Event)

3:00 PM – 5:00 PM, Boardroom 2 on the Mezzanine Level

This year the Association of Retired Conservation Service Employees (ARCSE) conducts a session at the conference for association members, conservation



retirees, and interested nonretiree SWCS registrants. The session features agency and association leadership speaking about the new ARCSE/NRCS Memorandum of Understanding for mentoring new agency employees as they engage to provide technical assistance and program support to climate-smart initiatives and the new farm bill. The agenda also includes a brief rollout of the new ARCSE strategic plan and presentation of annual ARCSE awards for community service and exceptional contributions to the association. The session culminates with an accounting of farming, cropping, and conservation system history in Iowa, from the perspective of long-time conservation employees. ARCSE hopes to make this a regular topic at SWCS as knowledge about the land's history continues to be vital for making conservation progress today. Those attending the session, but not registered for the entire conference, have the option to purchase a ticket to the Exhibit and Poster Reception immediately following, one of the primary networking opportunities of the week.

View the ARCSE Annual Meeting Agenda at www.swcs.org/23ACPartnerEvents.

Exhibitor and Poster Reception

5:00 PM – 7:00 PM, Grand Concourse and Rooms 308-310 and 318-320 on the Main Level

This reception offers a prime opportunity to visit with exhibitors showcasing their newest technology, programs, products, and services. Attendees will have the opportunity to view posters and hear from the authors. This is also a great time to connect with potential business associates and reconnect with colleagues. A selection of appetizers will be served, along with a cash bar.

A ticket for this event is included with full conference registration and Monday-only registration. Additional tickets may be purchased online in advance for guests or at the registration table if available.



 A poster for the Association of Retired Conservation Service Employees (ARCSE). It features a circular logo on the left with "SCS" and "NRCS" and a stylized "Z" shape. To the right of the logo, the text reads "Stay Connected To Conservation Through the Association of Retired Conservation Service Employees (ARCSE)". Below this is a list of ten bullet points:

- Get together frequently with members in your area
- Keep current with conservation programs and projects
- Offer to mentor new employees
- Support student internships
- Recognize our Senior Conservationists
- Honor members for outstanding service to their community and beyond
- Learn about volunteer and paid service opportunities
- Contribute stories, activities, and photos to the national newsletter and your state representative
- Follow us on Facebook
- Website: www.arcse.org

 At the bottom right, it says "Join Us!!". The background of the poster is a scenic view of a green field with a winding path.

MONDAY, AUGUST 7, 2023				
7:30 AM - 5:00 PM	Registration Desk Open			Main Level Memorial Hall
7:30 AM - 8:30 AM	Morning Coffee and Light Breakfast: Exhibit Hall and Poster Presentations Open			Main Level Grand Concourse Rooms 308-310 & 318-320
8:30 AM - 10:00 AM	SWCS Conference Opening - <i>Clare Lindahl, Soil and Water Conservation Society CEO</i> ; Keynote Sponsor - Tony Burd, Syngenta ; Pritchard Keynote Lecture: Fields of Hope: The Transformative Practices Healing Ecosystems, Producers, and Professionals - Elizabeth E. Hellman, Wichita State University			Upper Level Grand Ballroom B
10:00 AM - 10:30 AM	Morning Break: Exhibit Hall and Poster Presentations Open			Main Level Grand Concourse Rooms 308-310 & 318-320
10:30 AM - 12:00 PM	SYMPOSIUM SESSIONS			
Main Level Room 303 Conservation Innovation Grants Showcase	Introduction - <i>Caroline Sherony, USDA NRCS</i>			
Main Level Room 304 Professional Development	Expand your Influence: Understanding Generational Perspectives - <i>Jeanne Hamilton, WIN</i>			
Main Level Room 305 Climate-Smart Agriculture	Biochar: Conservation Innovation for Climate-Smart Agriculture and Forestry - <i>Loretta Metz, USDA NRCS</i>			
Main Level Room 306 Cultivating Conservation Technical Assistance, Community, and Networks	All Acres for Our Water: Systems Change for a 20% Reduction - <i>Peter E. Mead, The Nature Conservancy</i>			
10:30 AM - 12:00 PM	ORAL PRESENTATIONS			
	10:30 AM	10:53 AM	11:16 AM	11:39 AM
Main Level Room 313 Conservation Models, Tools, and Technologies	Combining Nutrient Trends Analysis at Long-Term Water Quality Monitoring Stations with Great Lakes to Gulf Conservation Data Layers to Visualize the Effects of Nutrient Reduction Strategies in the Hypoxia Task Force States - <i>Ellen Gilinsky, Great Lakes to Gulf</i>	Identification of Mechanisms Influencing Nutrient Transport on Upland Areas - <i>John E. Gilley, USDA ARS</i>	Prediction and Testing of Nutrient Transport Equations Developed for Upland Areas - <i>John E. Gilley, USDA ARS</i>	Utilizing Ag Retailer Data to Measure Conservation Practice Adoption by Iowa Farmers - <i>Ben Gleason, Iowa Nutrient Research and Education Council</i>
Main Level Room 314 Edge-of-Field Practices and Monitoring	Can Long-Term Soil Health Reduce Edge-of-Field Water and Nutrient Losses? - <i>Vinayak Shedeekar, Ohio State University</i>	Edge-of-Field Water Quality Monitoring in Western Kentucky - <i>Brad Lee, University of Kentucky</i>	Engineering Lessons Learned for Edge-of-Field Blitz Projects - <i>Caleb D. Rasmussen, ISG</i>	Use of Archived Soil and Water Measurement from the Fort Cobb Reservoir Experimental Watershed (FCREW) to Mimic an Edge-of-Field Experiment for Monitoring of Natural Resources - <i>Ann Marie Fortuna, USDA ARS</i>
Main Level Room 315 Outreach, Education, and Community Engagement	Building a Conservation Community: The Great Lakes Sediment and Nutrient Reduction Program - <i>Connor E. Roessler, Great Lakes Commission</i>	Enhancing Conservation Adoption Using Agronomic Principles - <i>Benjamin Porepp, Iowa Soybean Association</i>	Improving Conservation Delivery by USDA - <i>Alex Echols, The Keith Campbell Foundation for the Environment</i>	Land Use Concerns and the Adoption of Utility-Scale Solar in Local Communities - <i>Jian Chen, Iowa State University</i>
Main Level Room 316 Soil Health Resources, Indicators, Assessment, and Management	Factoring Soil Health into Land Valuation: An Economic Driver for Resilient Agriculture - <i>Bill Schleizer, Delta Institute</i>	Soil Decompaction and Compost Amendments Improve Infiltration Rates and Soil Health in Urban Development - <i>Grant L. Thompson, Genus Landscape Architects</i>	Soil Health Management Indices for Cropping Systems of North America - <i>Adebukola Dada, Soil Health Institute</i>	Soil Health Responses to Tillage, Manure, and Cropping Practices in Ohio - <i>William Osterholz, USDA ARS</i>
Main Level Room 317 Water Resource Assessment and Management	Evaluation of Edge-of-Field Sulfate Runoff Losses at Eight Arkansas Discovery Farms - <i>James M. Burke, University of Arkansas</i>	Hydrological Modeling of a Wetland Complex in Hamilton County, Iowa, using HydroGeoSphere - <i>Jorge Alejandro Gomez Martinez, Iowa State University</i>	Integrated Surface-Subsurface Modeling of a Low-Head Dam to Enhance Aquifer Recharge - <i>Berret S. Eustace, Iowa State University</i>	Wetland Siting and Implementation: Successes, Challenges, and Lessons Learned - <i>Spencer Pech, ISG</i>

MONDAY, AUGUST 7, 2023			
12:00 PM - 1:15 PM	State of the Society Address to the House of Delegates and Regional Sessions (SWCS Members Luncheon) (ticket required, additional fees apply for nonmembers and guests)		Upper Level Grand Ballroom B
1:30 PM - 3:00 PM	SYMPOSIA SESSIONS		
Main Level Room 303 Conservation Innovation Grants Showcase	Water Quality and Nutrient Management - Leah Hermens, USDA NRCS		
Main Level Room 304 Professional Development	1:30 PM - 2:10 PM Creating a Compelling Culture - Jason "JC" Gayle, Compel Movement, LLC	2:15 PM - 3:00 PM Finding Success Through Conflict Resolution - Scott Tillema, The Negotiations Collective	
Main Level Room 305 Adaptive Management of Conservation Efforts	Measuring Nonpoint Source Nutrient Reductions in the Mississippi River Basin through the Gulf Hypoxia Program - Jake Greif, US EPA		
Main Level Room 306 Climate-Smart Agriculture	The Role of Climate-Smart Agriculture in Soil and Water Conservation and Air Quality - Gretchen Sassenrath, Kansas State University		
Main Level Room 307 Edge-of-Field Practices and Monitoring	Edge-of-Field Blitz: Guiding the Process - Caleb D. Rasmussen, ISG and John Swanson, Polk County Public Works		
1:30 PM - 3:00 PM	ORAL PRESENTATIONS		
	1:30 PM A Farmer's Guide to Soil Health Economics - Ben Wiercinski, American Farmland Trust	1:53 PM Economics of Soil Health Systems across Thirty US Farms - Archie Flanders, Soil Health Institute	2:16 PM Using Economics and Sequential Diagnostic Monitoring to Rapidly Meet Water Quality Goals - Mike Kinney, Comfort Lake Forest Lake Watershed District
Main Level Room 314 Conservation Economics and Policy	1:30 PM Combining Decision Support Tools for a New Era of Conservation Planning - Haleigh Summers, Iowa State University	1:53 PM ISAP's Conservation Story Map: Using Interactive, Place-Based Storytelling to Support Farmers and Communicate State-Wide Conservation Efforts - Helen VanBeek, American Farmland Trust	2:16 PM Using a Cooperative Research Network to Define Dynamic Soil Property and Soil Health Reference Conditions for Soil Survey - Skye Wills, USDA NRCS
Main Level Room 315 Cultivating Conservation Technical Assistance, Community, and Networks	1:30 PM Agricultural Ecosystem Service Marketplaces: Farmer Perspectives on Program Efficacy and Soil Health Management - Sara Kelemen, USDA Northeast Climate Hub	1:53 PM Cultivating Farmer Leadership and Farmer-to-Farmer Learning through Innovative Data-Driven Communication - Jenny Seifert and Cara Urban, University of Wisconsin	2:16 PM Differing Approaches to Farmer Outreach between Conservation Agencies - Adam P. Reimer, National Wildlife Federation
Main Level Room 316 Social Sciences Informing Conservation	1:30 PM Long-Term Soil Erosion Effects on Plant Available Water Capacity - Stephen Anderson, University of Missouri	1:53 PM Utilizing Traditional Ecological Knowledge to Guide the Development of a USDA NRCS Interim Conservation Practice on Soil Health - Michael Margo, USDA NRCS	2:16 PM How a Website for Farmer-to-Farmer Learning about Conservation Practices Applies the Science of Behavior Change - Jenny Seifert, University of Wisconsin-Madison Division of Extension
Main Level Room 317 Soil Health Resources, Indicators, Assessment, and Management	1:30 PM How Management Impacts the Functionality of Surface Aggregates and Resilience to Rainfall Intensification - Ken Wach, USDA ARS	1:53 PM Correlations between Management Practices and Aggregate Stability in Central Kansas - Adam Petty, Kansas State University	2:16 PM How Management Impacts the Functionality of Surface Aggregates and Resilience to Rainfall Intensification - Ken Wach, USDA ARS

MONDAY, AUGUST 7, 2023				
3:00 PM - 3:30 PM	Afternoon Break: Exhibit Hall and Poster Presentations Open			Main Level Grand Concourse Rooms 308-310 & 318-320
3:00 PM - 5:00 PM	Association of Retired Conservation Service Employees (ARCSE) Annual Meeting (Partner Event)			Mezzanine Level Boardroom 2
SYMPOSIUM SESSIONS				
Main Level Room 303 Conservation Innovation Grants Showcase	Soil Health and Cover Crops - Ed Henry, USDA NRCS			
Main Level Room 304 Professional Development	3:30 PM - 4:10 PM Mission-Driven Success in Grant Writing and Fundraising for Conservation Programs! - Ann Wolf, MidwestHealthyAg.ORG	4:15 PM - 5:00 PM Perfecting your Pitch: Strategies to Tell your Soil and Water Story - Rebekah Jones, Iowa Agriculture Water Alliance		
Main Level Room 305 Climate-Smart Agriculture	Climate-Smart Practices: The Role of Certified Crop Advisers in Decision-Making - Dennis Today, USDA ARS			
Main Level Room 306 Cultivating Conservation Technical Assistance, Community, and Networks	Building a Conservation Agronomist Program - Jeffrey Kappen, Baton Global			
ORAL PRESENTATIONS				
3:30 PM - 5:00 PM	3:30 PM	3:53 PM	4:16 PM	4:39 PM
Main Level Room 313 Adaptive Management of Conservation Efforts	Assessing Fertility Needs, Associated Crop Yields, and Environmental Benefits of Intermediate Wheatgrass in Eastern Nebraska - Roberta Bianchin Rebesquini, University of Nebraska-Lincoln	Biodiversity of Intercropped Corn or Sorghum with Alfalfa in Establishment Year - Haley M. Mosqueda, North Dakota State University	Companion Cropping of Spring Canola and Spring Peas in Eastern Oregon - Don J. Wysocki, Oregon State University	How the Feed in Focus (Fif) Program Is Helping Farmers to Achieve Their Conservation Goals - Ricardo Costa, The Nature Conservancy
Main Level Room 314 Conservation Models, Tools, and Technologies	Developing a Model to Evaluate Prairie Strip Placement - Kelly Nascimento Thompson, Iowa State University	Estimating Evapotranspiration of Perennial Grasses under Integrated Landscape Management System Using Machine Learning - Julian Cacho, Argonne National Laboratory	Expanding the Daily Erosion Project from Agricultural Areas to Forests - Timothy J. Sklenar, Iowa State University	Improving Land and Soil Ecosystem Services in Houston, Texas, through Multidisciplinary Framework that Encourages Consistent Methods for Large-Scale Tree Planting and Native Grass Bioswales to Increase Sustainable Land Use and Water Pollution Reductions - Deborah January-Beyers, Houston Wilderness
Main Level Room 315 Outreach, Education, and Community Engagement		Communicating Conservation and Climate-Smart Funding Opportunities - Jean Brakish, American Farmland Trust	Equity in Conservation Outreach through Cooperative Agreements - Jill Reinhart, USDA NRCS	Overview of the Soil and Water Conservation Laboratory Manual and Open Textbook - Colby J Moorberg, Kansas State University
Main Level Room 316 Soil Health Resources, Indicators, Assessment, and Management	Can We Improve Fragipan Soils' Health Adopting Annual Ryegrass Cover Crop? - Amitava Chatterjee, USDA ARS	Cover Crop Effects on Yield and Soil Health in Iowa - Matthew E. Carroll, Iowa Soybean Association	Decomposition and Nitrogen Release from Grass and Legume Cover Crops in Eastern Nebraska - Tawana Almeida, University of Nebraska - Lincoln	Physical and Hydraulic Soil Health Indicators in Some Annual and Perennial Cover Crops in Georgia - Chandler Gruener, University of Georgia
Main Level Room 317 Water Resource Assessment and Management	A Watershed Approach to Municipal Source Water Protection - Mary Beth Stevenson, City of Cedar Rapids	Development of a Hillslope Hydrologic Monitoring Site in a Riparian Pasture/Row-Crop Setting for the Study of Aquifer Recharge, Erosion, and Groundwater-Surface Water Interactions - Andrew M. O'Reilly, USDA ARS	Impact of No-Till, Cover Crops, and Tile Drainage on Soil Moisture Dynamics within the Root Zone - Ajay K. Saha, South Dakota State University	Impacts of Biochar and Cover Crops on Soil Hydraulic Properties in Sandy, Sloping, and Low C Soils - Humberto Blanco, University of Nebraska-Lincoln
5:00 PM - 7:00 PM	Exhibitor and Poster Reception			Main Level Grand Concourse Rooms 308-310 & 318-320

TUESDAY, AUGUST 8

SCHEDULE AND EVENTS

SCHEDULE

7:30 AM – 5:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
7:30 AM – 8:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Coffee and Light Breakfast: Exhibit Hall and Poster Presentations Open
8:30 AM – 10:00 AM <i>Grand Ballroom B on the Upper Level</i>	Opening Remarks and Plenary Session
10:00 AM – 10:30 AM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Morning Break: Exhibit Hall and Poster Presentations Open
10:30 AM – 12:00 PM <i>See pages 36-38</i>	Concurrent Sessions
12:00 PM – 1:15 PM <i>Grand Ballroom B on the Upper Level</i>	Awards Luncheon and Reflections from 2023 Hugh Hammond Bennett Award Winner
1:30 PM – 3:00 PM <i>See pages 36-38</i>	Concurrent Sessions
3:00 PM – 3:30 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Afternoon Break: Exhibit Hall and Poster Presentations Open
3:30 PM – 5:00 PM <i>Grand Concourse and Rooms 308-310 and 318-320 on the Main Level</i>	Exhibit and Poster Tear Down
3:30 PM – 5:00 PM <i>See pages 36-38</i>	Concurrent Sessions
5:00 PM – 6:30 PM <i>Boardroom 2 on the Mezzanine Level</i>	Women in NRCS (WiN) Annual Meeting (Partner Event)

EVENTS

Opening Remarks and Plenary Session

8:30 AM – 10:00 AM, Grand Ballroom B on the Upper Level

The Tuesday plenary session will be opened by SWCS Board Chair Rebecca Power, followed by this year's presentation, "At the Intersection of Practice, Research, and Policy."

Presenters: *Carrie Lindig, USDA NRCS Acting Regional Conservationist, Central Region; Steven Kappes, USDA ARS Associate Administrator; Rachel Owen, SWCS Senior Advisor and Rachel K. Owen, LLC*

Join the USDA Natural Resources Conservation Service (NRCS) and the USDA Agricultural Research Service (ARS) for the most recent announcements and resources in the practice and research of soil, water, and natural resources conservation. SWCS's new senior advisor will offer policy updates relative to conservation professionals during this session as well.

For more than 80 years, the NRCS has helped people make investments in their operations and local communities to keep working lands working, boost rural economies, increase the competitiveness of American agriculture, and improve the quality of our air, water, soil, and habitat.

The ARS is the USDA's chief scientific in-house research agency. Our job is finding solutions to agricultural problems that affect Americans every day from field to table.



Carrie Lindig has served as the NRCS acting regional conservationist for the Central Region since January of 2023. She provides agency and natural resources leadership and support to state conservationists and partners in 12 states within the central portion of the country, which includes Iowa.

Before being selected as acting Central Regional conservationist, Lindig was the NRCS Easement Program Division director. She has also served as the New Jersey state conservationist and held multiple leadership positions in New York, Montana, Idaho, and Arizona.

A native Texan, Lindig holds a bachelor of science in rangeland management from Texas Tech University and a master's degree in range science from Colorado State University. She and her husband own family farms in Texas. They have five grown children and two grandchildren.



Steven M. Kappes became the ARS associate administrator for the Office of National Programs in August of 2016. The Office of National Programs sets the research direction and develops budgets for the entire ARS research portfolio, which includes plants, animals,

natural resources, human nutrition, insects, and microbial pathogens. The Office of National Programs also includes the international research program. Prior

to the associate administrator appointment, Kappes served as the ARS deputy administrator for Animal Production and Protection (APP) in the Office of National Programs. The APP program includes animal production, animal health, entomology, aquaculture, and animal well-being research in cattle, pigs, sheep, horses, trout, catfish, and salmon. The APP staff also includes the ARS Biosafety Officer and the ARS Animal Care Officer.

Currently, Kappes is leading the ARS Big Data Initiative. He had also served as a senior advisor for APP in the USDA, Office of the Chief Scientist. He has worked with USDA agencies on issues related to animal health and production, herbicide resistance, and biosafety and biocontainment in high and maximum biocontainment laboratories. He is also co-leading the standup of National Bio and Agro-Defense Facility in Manhattan, Kansas, a foreign animal disease research, training, and diagnosis facility. USDA will be able to conduct research on zoonotic animal diseases, diseases that also infect humans, and partner with the pharmaceutical industry in developing vaccines and other biologicals to control disease.

Growing a Sustainable Future

Farmers are among our greatest conservation allies. They help feed, fuel and clothe a growing world, while caring for the lands and waters on which we all depend. By taking care of their greatest capital asset—the soil—farmers are key to helping tackle our greatest conservation challenges.

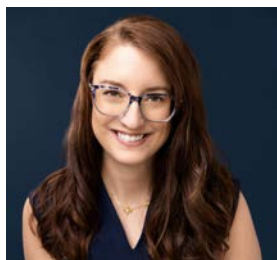
It's time to unearth the power of soil health.

The Nature Conservancy 

nature.org/workinglands

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Previously he co-chaired a US Government Interagency Biosafety Taskforce and was co-chair of the National Science and Technology Council Subcommittee on Foreign Animal Disease Threats. Kappes was a member of the USDA One Health Joint Working Group and worked with USDA agencies and the Food and Drug Administration to address issues on antimicrobial resistance.



Rachel Owen is a soil scientist who has built a career in policy and social entrepreneurship. She co-founded and served as the inaugural executive director for MOST Policy Initiative, a nonprofit focused on

bringing scientific information to policy conversations at the state-level in Missouri. More recently, Owen led government relations for the Agronomy, Crop, and Soil Science Societies of America. She is dedicated to promoting bipartisan, science-based policy decisions at all scales. Owen received a PhD in soil science from the University of Missouri School of Natural Resources, holds an MS in plant science from South Dakota State University, and a dual BS in agronomy and global resource systems from Iowa State University.

Awards Luncheon and Reflections from 2023 Hugh Hammond Bennett Award Winner

**12:00 PM – 1:15 PM, Grand Ballroom B on the
Upper Level**

Presenters: *Rebecca Power, Soil and Water Conservation Society Board Chair; Dale Threatt-Taylor, 2023 Hugh Hammond Bennett Award Winner*

SWCS is pleased to honor award recipients who have exhibited exemplary service to the conservation community. Award recipients demonstrate excellence in supporting the Society's mission to advance soil, water, and related natural resources conservation to achieve sustainability. Individuals, organizations, and chapters nominated for these awards competed on a national and international level against others who have demonstrated leadership, creativity, and dedication in delivering assistance to landowners, communities, or local governments. Women in NRCS (WiN) will also be presenting their 2023 awards.

A ticket for this event is included with full conference registration and Tuesday-only registration. Additional tickets may be purchased online in advance for guests or at the registration table if available.



Dale Threatt-Taylor is recognized for her major contributions to the conservation of natural resources through this prestigious award.

Her career began as a soil conservationist with the USDA Natural Resources Conservation Service. She

later joined the Wake Soil and Water Conservation District (SWCD) as a conservation technician and progressively moved into one of the natural resource conservationist positions. In 2008 she was selected as district director of Wake SWCD and Wake County Soil and Water Conservation Department.

In her current role as The Nature Conservancy's South Carolina executive director, she is building new relationships between natural resource conservationists and environmentalists across the nation. Threatt-Taylor believes locally led conservation begins with an individual and that our collective efforts are key to protecting the lands and waters on which all life depends.

She received a Bachelor of Science degree in conservation from North Carolina State University and a Master of Environmental Management degree from Duke University in 2011. In 2012, she was selected as one of 30 agriculturalists in North Carolina to participate in the Agricultural Leadership Development Program at North Carolina State University.

Over the years, she has served in several organizations, and, most importantly to SWCS, she served as chair of the national Board of Directors from 2020 to 2022. Threatt-Taylor has received numerous awards, including the Order of the Long Leaf Pine from North Carolina Governor Roy Cooper for her dedicated work in conservation.

Throughout her career, she has led with an infectious positive and brilliant demeanor that excites a room and elevates any project she touches. We are grateful

for her leadership within SWCS and in the conservation field at large. She is a well-deserving recipient of the Hugh Hammond Bennett Award.

Women in NRCS (WiN) Annual Meeting (Partner Event)

5:00 PM – 6:30 PM, Boardroom 2 on the Mezzanine Level

The National Organization of Professional Women in NRCS (WiN) will be hosting their Annual Business Meeting to discuss their 2023 accomplishments, celebrate their members, and plan for the fall elections and the upcoming year. Everyone is welcome to

attend and learn more about the organization and the opportunities that are available to members. WiN's membership is open to anyone who supports their mission and is not limited to women or NRCS employees.

View the WiN Annual Meeting Agenda at www.swcs.org/23ACPartnerEvents.

**Congratulations
2023 WiN Award Winners!**

- Conservationist of the Year**
The Three Calhoun Sisters
- Individual Award of Excellence**
Elizabeth Oelman
- Group Award of Excellence**
WiN Mentoring Committee
- Outstanding Member Award**
April Wilson

If you are looking for a network of strong and supportive women and allies, please consider joining Women in NRCS (WiN).

Join WiN Today!

Join via QR code below.

WiN Mission:
To provide women with training, opportunities, and mentoring to develop into their fullest professional potential.

WiN Vision:
High performing, diverse, innovative, and motivated female employees who transform the workplace.

2023 WiN Executive Board

- Jeanne Hamilton, President
- Val Hartman, Past President
- Jackie Byam, Executive Vice President
- Christine Hall, Vice President
- LaKeitha Ruffin, Treasurer of Finance
- Heather Hinson, Treasurer of Membership
- Stephanie Goglia, Secretary

2023 Regional Representatives

- Leann Schmidt, West
- Jenny Templeton, Southeast
- Annette Holmes, Midwest
- Katie Cerretani, Northeast
- Veronica O'Donnell, Southcentral
- Lacy Fallon, Northern Plains

TUESDAY, AUGUST 8, 2023				
7:30 AM - 5:00 PM	Registration Desk Open		Main Level Memorial Hall	
7:00 AM - 8:30 AM	Morning Coffee and Light Breakfast: Exhibit Hall and Poster Presentations Open		Main Level Grand Concourse Rooms 308-310 & 318-320	
8:30 AM - 10:00 AM	Opening Remarks - Rebecca Power, Soil and Water Conservation Society Board Chair; Plenary Session: At the Intersection of Practice, Research and Policy - USDA NRCS Acting Regional Conservationist, Central Region Carrie Lindig, USDA ARS Associate Administrator Steven Kappes; Rachel Owen, SWCS Senior Advisor and Rachel K Owen, LLC		Upper Level Grand Ballroom B	
10:00 AM - 10:30 AM	Morning Break: Exhibit Hall and Poster Presentations Open		Main Level Grand Concourse Rooms 308-310 & 318-320	
10:30 AM - 12:00 PM		SYMPOSIUM SESSIONS		
Main Level Room 303 CEAP Showcase	20 Years of Conservation Practice Assessments - Kevin King, USDA ARS			
Main Level Room 304 Climate-Smart Agriculture	How Much Topsoil Do We Have, and Can We Protect and Build Topsoil before It Disappears? - Daniel P. Zinkand, DZC, LLC			
Main Level Room 305 Conservation Models, Tools, and Technologies	Exploring Crop Diversification with Perennial Bioenergy Crops: How to Conduct Meaningful Outreach and Engage Farmers - Marlee Giacometti, American Farmland Trust			
Main Level Room 306 Cultivating Conservation Technical Assistance, Community, and Networks	Cultivating Action: How Do Women Take Conservation Action? - Jean C. Eells, E Resources Group, LLC			
Main Level Room 307 Outreach, Education, and Community Engagement	Equipping Next Gen Ag and Conservation Professionals - Erin Meier, University of Minnesota			
10:30 AM - 12:00 PM		ORAL PRESENTATIONS		
Main Level Room 314 Adaptive Management of Conservation Efforts	10:30 AM	10:53 AM	11:16 AM	11:39 AM
	Addition of Biochar Decreased Soil Respiration in a Permanent No-Till Cover Crop System for Organic Soybean Production - Ratih Kernala Dewi, Tokyo University of Agriculture and Technology	Intensifying a No-Till Sorghum-Soybean-Winter Wheat Rotation with Double Crops and Cover Crops - Craig Rozeboom, Kansas State University	Long-Term No-Tillage and Rye Cover Crop Systems Improve Soil Water Retention by Increasing Soil Organic Carbon in Andosols, Kanto, Japan - Rahmatullah Hashimi, Tokyo University of Agriculture and Technology	Maximizing Cover Crop Biomass Production in Corn-Based Systems: Case Studies and Modeling - Sabrina J. Ruis, USDA ARS
Main Level Room 315 Edge-of-Field Practices and Monitoring	Comparing Vegetated and Unvegetated Shallow Furrow Ditches: Water Quality and Quantity Responses - Elizabeth R. Schwab, The Ohio State University	Design Criteria for a New Tile Drainage Conservation Practice in Grass Waterways - Keith Schilling, Iowa Geological Survey	Working across Multiple Scales to Assess Effectiveness of Agricultural Practices for Improving Water Quality in Tile-Drained Agricultural Watersheds: Long-Term Assessment from the Mackinaw River, Illinois, United States - Maria Lemke, The Nature Conservancy	
Main Level Room 316 Soil Health Resources, Indicators, Assessment, and Management	Assessment of Soil Carbon Stocks in Texas Cropping Systems - Joseph Burke, Texas A&M AgriLife Research	Enhanced Soil Moisture Estimation via Intelligent Full Waveform Inversion of Ground Penetrating Radar Data - Seyed Zekavat, Worcester Polytechnic Institute	Ground Penetrating Radar System Design for Intelligent Root-Zone Soil Moisture Characterization and Optimal Farm Irrigation - Seyed Zekavat, Worcester Polytechnic Institute	Soil Chemistry is Not Altered by Adopting Cover Crops and Reducing Tillage in the Early Transitional Period - Ivo Müller, Mississippi State University
Main Level Room 317 Water Resource Assessment and Management		Paired Small Watersheds Assess Conservation Efforts with Producer Input - Gary Feyereisen, USDA ARS	Sediments and Nutrients of the Lower Des Moines River Delta at Red Rock Reservoir, Iowa - Matthew Streeter, University of Iowa	Watershed-Scale Feasibility Assessment for Drainage Water Recycling Implementation - Spencer Pech, JSG

TUESDAY, AUGUST 8, 2023			
12:00 PM - 1:15 PM	Awards Luncheon and Reflections from 2023 Hugh Hammond Bennett Award Winner - Rebecca Power, Soil and Water Conservation Society Board Chair; Dale Threault-Taylor, 2023 Hugh Hammond Bennett Award Winner		Upper Level Grand Ballroom B
1:30 PM - 3:00 PM	SYMPOSIUM SESSIONS		
Main Level Room 304 CEAP Showcase	Approaches, Techniques, and Processes for Assessing Conservation Practices - Lisa Durlanick, USDA NRCS		
Main Level Room 305 Adaptive Management of Conservation Efforts	Understanding Retention of Cover Cropped Acres: A Midwestern Watershed Scale Case Study - Seth Harden, The Nature Conservancy		
Main Level Room 306 Climate-Smart Agriculture	Accelerating Conservation Drainage in Iowa Using the Batch and Build Model - Keegan J. Kult, Ag Drainage Management Coalition		
Main Level Room 307 Social Sciences Informing Conservation	Topics in Conservation History and Education - Joe Otto, Soil and Water Conservation Society		
1:30 PM - 3:00 PM	ORAL PRESENTATIONS		
	1:30 PM	1:53 PM	2:16 PM
Main Level Room 313 Climate-Smart Agriculture	Grass to Gas: Stakeholder Perspectives on the Development of a Hypothetical On-Farm Perennial Grass-Based Renewable Natural Gas Production Value Chain - Chris Morris, Iowa State University	Save Farmland, Protect the Climate: Case Study of Avoided Emissions from an Agricultural Conservation Easement in Central Illinois - Bonnie McGill, American Farmland Trust	Smart Solar Siting: Agrivoltaics in the Midwest - Joel A. Tatum, American Farmland Trust
Main Level Room 314 Conservation in Organic, Specialty, Small-Scale, or Urban Agriculture	A Whole-Systems Approach to Reducing Tillage in Organic Farming for Sustainable Grain Production - Ravi Teja K.R. Neelipally, University of Tennessee	Assessing and Managing Urban Soil Health: Tools and Training from USDA NRCS - Joshua Beniston, USDA NRCS	Utilizing Sustainability Initiatives as Models for Urban Soil Restoration - David Dechant, Arboguard (A Davey Tree Expert Company)
Main Level Room 315 Conservation Models, Tools, and Technologies	A Geospatial Tool for Identifying Marginal Land and Assessing the Ecosystem Services of Perennial Bioenergy Crops - John Quinn, Argonne National Lab	Consideration of Restored Floodplain Easements in the Agricultural Conservation Planning Framework (ACPF) and the Financial and Nutrient Reduction Tool (FINRT) - Kelsey D. Karnish, Iowa State University	Iowa Food-Energy-Water nexus (IFEWS): A Visualization Tool and Model for Decision-Making - Julia Brittles Tuthill, Iowa State University
Main Level Room 316 Soil Health Resources, Indicators, Assessment, and Management	Linking Soil Health Assessment to Edge-of-Field Water Quality in the Great Lakes Basin - Molly Meyers, University of Wisconsin-Green Bay	Soil Health Assessment in Double-Cropping Wheat Systems across Texas - Hector L. Valencia, Texas A&M Agrilife	Soil Health Interpretation Portal (SHIP): An Expandable, Exploratory Database to Compare Management Practice Influence on Iowa's Regional Soil Health - Suzanne Fey, Iowa Soybean Association
Main Level Room 317 Water Resource Assessment and Management	Lessons, Challenges, and Barriers: Advancing the National Nonpoint Source Clean Water Act §319 Program to Address Advancing Equity, Climate Change - Cyd Curtis, US EPA	Market District: A Public-Private Partnership to Design and Construct One of the Largest Green Infrastructure Neighborhoods in the Midwest - Craig Clarkson, ISG	USDA NRCS In-Field Forest Soil Health Assessment - Joe Williams, USDA NRCS
			The Great Rivers Ecological Observatory Network (GREON): Lessons Learned from the First 10 Years of Automated Water Quality Monitoring - John J. Sloan, National Great Rivers Research and Education Center

TUESDAY, AUGUST 8, 2023

3:00 PM - 3:30 PM	Afternoon Break: Exhibit Hall and Poster Presentations Open	Main Level Grand Concourse Rooms 308-310 & 318-320
3:30 PM - 5:00 PM	Exhibit and Poster Tear Down	Main Level Grand Concourse Rooms 308-310 & 318-320
3:30 PM - 5:00 PM	SYMPOSIUM SESSIONS	
Main Level Room 303 CEAP Showcase	Development and Assessment of Conservation Tools and Modeling - <i>Dave Bjorneberg, USDA ARS</i>	
Main Level Room 304 Adaptive Management of Conservation Efforts	Updates from the DiverseCornBelt: Enhancing Rural Resilience through Landscape Diversity in the Midwest - <i>Emily M. Usher, Purdue University</i>	
Main Level Room 305 Climate-Smart Agriculture	The Benefits of Carbon and Soil Health Programs to Meet Local Resource Concerns - <i>Meg Leader, NACD</i>	
Main Level Room 306 Cultivating Conservation Technical Assistance, Community, and Networks	Investing in People to Improve Watersheds - <i>Jenny Seifert, University of Wisconsin-Madison Division of Extension</i>	
Main Level Room 307 Water Resource Assessment and Management	Understanding a Midwestern Watershed: An In-Depth Analysis of a Farmer-Led Watershed Group Support, Student Water Quality Monitoring, Human Dimensions Analysis, and Hydrologic Impacts in the Shell Creek Watershed - <i>Katie Pekarek, University of Nebraska</i>	
3:30 PM - 5:00 PM	ORAL PRESENTATIONS	
	3:30 PM	3:53 PM
Main Level Room 314 Conservation Economics and Policy	Alternative Farming Systems to Maintain Profitability while Reducing Nitrogen and GHG Emissions - <i>Mohammad Khakbazon, Agriculture and Agri-Food Canada</i>	Capturing the Full Value of Cover Crops - <i>Jeffrey Kappen, Baton Global</i>
Main Level Room 315 Conservation Models, Tools, and Technologies	In-Stream Bioremediation Filters and <i>E. coli</i> Reduction - <i>Amy Kay, City of Davenport and Partners of Scott County Watersheds</i>	Terrain Index Estimation of Gully Head Location in the Midwest - <i>Brian Gelder, Iowa State University</i>
Main Level Room 316 Edge-of-Field Practices and Monitoring	A Decade of Saturated Buffer Research: Results from Long-Term Monitoring in Iowa - <i>Gabriel M. Johnson, Iowa State University</i>	Effectiveness of Grass Buffer Strip in Reducing Surface and Subsurface Nutrient Losses from Agricultural Fields in Western Illinois - <i>Essam El-Naggar, Metropolitan Water Reclamation District of Greater Chicago</i>
Main Level Room 317 Outreach, Education, and Community Engagement	Applying Social Science to Motivate Farmers and Landowners to Adopt Water Quality Practices - <i>Jean McGuire, The Wetlands Initiative</i>	Growing Partnerships and Relationships for Increasing Wetland Practice Adoption - <i>Jill Kostel, The Wetlands Initiative</i>
5:00 PM - 6:30 PM	Women in NRCS (WIN) Annual Meeting (Partner Event)	
		Mezzanine Level Boardroom 2

Modeling Growers' SNA Decisions and Evaluating the Economic and Environmental Outcomes of PACE - *Xuche Gong, Iowa State University*

Using Big Data, Remote Sensing, and Computation to Improve the Efficiency of Conservation Area Identification - *James Zollweg, SUNY Brockport*

Implementation of Precision Agricultural in Dryland Cropping System - *Maysoon M. Mikha, USDA ARS*

Preparing the Next Generation of Extension Water Stewards - *John McMaine, South Dakota State University*

WEDNESDAY, AUGUST 9

SCHEDULE AND EVENTS

SCHEDULE

7:30 AM – 12:00 PM <i>Memorial Hall on the Main Level</i>	Registration Desk Open
7:30 AM – 8:30 AM <i>Grand Concourse on the Main Level</i>	Morning Coffee and Light Breakfast
8:00 AM – 4:00 PM <i>Meet at Memorial Hall on the Main Level at 7:40 AM</i>	*Tour 1: Voyage through Town, Country, and History
8:30 AM – 10:00 AM <i>See pages 41-42</i>	Concurrent Sessions
10:00 AM – 10:30 AM <i>Grand Concourse on the Main Level</i>	Morning Break
10:30 AM – 12:00 PM <i>See pages 41-42</i>	Concurrent Sessions
12:00 PM	Conference Adjourns
1:00 PM – 5:00 PM <i>Meet at Memorial Hall on the Main Level at 12:40 PM</i>	*Tour 2: Generational Women in Agriculture Tour
1:00 PM – 5:00 PM <i>Meet at Memorial Hall on the Main Level at 12:40 PM</i>	*Tour 3: Downtown Des Moines Walking Tour

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

Tours will leave on time. Roll call will be taken prior to departure, and SWCS staff and volunteers will make every effort to ensure all participants are on the bus. However, due to transportation scheduling, buses will not be held for those arriving late, and refunds will not be issued for missing the bus.

Tour 1: Voyage through Town, Country, and History

8:00 AM – 4:00 PM

This tour will take you through a brief history of a central Iowa watershed. We will start at a Century Farm and learn about and appreciate the stewardship and commitment to the farm of the landowners through generations. Soil and water conservation practices implemented years ago will be viewed, followed by edge-of-field practices including a saturated buffer, a woodchip bioreactor, and filter strips. Next we will see the latest practices implemented for soil health including prairie strips, cover crops, and no-till. Water quality and other monitoring systems installed will also be discussed.

The next stop will be the SWCS headquarters for a catered lunch, a tour of your Society's home office and grounds, and exploration of conservation education demonstration trailers developed by Iowa Learning Farms and Iowa State University Extension and Outreach. Built in 1963 and funded entirely through member donations, SWCS headquarters houses staff offices, meeting space, and the SWCS archives. It is the oldest nonprofit organization in Ankeny and one of the city's oldest businesses. SWCS headquarters is dedicated to the memory of Hugh Hammond Bennett and is the home of his collection of conservation documents and mementoes. The tour will include a tour of the SWCS headquarters building and its uniquely mid-century modern architecture. Never-before-displayed artifacts in the Hugh Hammond Bennett Collection will be exhibited.

The next part of the tour will include driving through the Prairie Trails development of the City of Ankeny. This mixed commercial and residential subdivision has green infrastructure designed, planned, and implemented from the early stages of development. You will see several

EVENTS

Conservation Tours

All participants of tours should meet in Memorial Hall on the Main Level at least 20 minutes prior to the departure times listed.

examples of the stormwater “treatment trains.” As we travel further downstream into the watershed we will stop at Trail’s End Mitigation Bank to discuss the need for, and development of, a wetland mitigation bank. The final tour stop will be at Gray’s Station Stormwater Wetland. The luncheon tour is graciously sponsored by Hickenbottom.



View the Tour 1 Agenda at www.swcs.org/23ACTours.

Tour 2: Generational Women in Agriculture Tour

1:00 PM – 5:00 PM

This tour, supported by Women in NRCS (WiN), will visit two unique agricultural operations that are generationally owned and operated by women. The farms are located within 30 minutes of the conference center. Each producer will host participants on her farm and give a tour of the operations. They will share their stories of generational differences, achievements, and struggles while describing how they overcame obstacles. The Generational Women in Agriculture tour will ultimately highlight the progress of women owners and operators in agriculture.

View the Tour 2 Agenda at www.swcs.org/23ACTours.

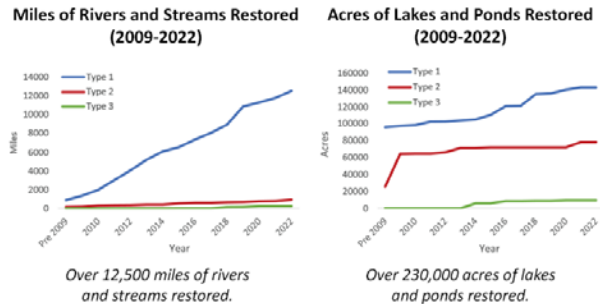
Tour 3: Downtown Des Moines Walking Tour

1:00 PM – 5:00 PM

This walking tour will highlight several conservation-minded components of the downtown Des Moines metro area. The first stop will include a tour of the World Food Prize Hall of Laureates, home of the annual award to recognize great achievements in agriculture and fighting hunger. The tour will highlight the story of the founder, Dr. Norman Borlaug; the history of the World Food Prize; the work of their laureates, other awardees, and youth programs; as well as a historical and architectural perspective of the transformation from a public library built in 1903 to the LEED Platinum-certified World Food Prize headquarters of today. LEED features include solar panels; geothermal wells; a rainwater harvesting cistern; waste reduction through reuse of existing materials as well as recycled, regional materials; lighting and electrical efficiencies; and many more.

The next stop will visit the Market District, part of a forward-looking, sustainable-focused, and intentional mixed-use development to renovate an underutilized area

The Clean Water Act 319 Nonpoint Source program gets to the (non)point - improving and protecting water quality through partnerships, technical assistance and watershed plans.



Nonpoint source (NPS) program success stories highlight NPS pollution-impaired water bodies where restoration efforts have led to documented water quality improvements for a range of pollutant causes and types. Since 2009, success stories have documented over 1080 waterbodies restored and improved.

Learn more: <https://www.epa.gov/nps>



of downtown and transform it into a community of the future. The 12 square block area was a former industrial hub known for flooding issues but is quickly turning into a model for sustainability with water quality as its bedrock. The Market District Green Infrastructure Plan features stormwater management, green infrastructure, pedestrian-friendly and cycling-focused enhancements, as well as business and neighborhood connectivity. This discussion will focus on the importance of public-private partnerships to push large-scale green infrastructure projects forward and pave the way for bold urban water management solutions.

The last part of the tour will take place at Peace Tree Brewing Company and feature a suite of guest speakers while you enjoy a refreshing beverage of your choice. Peace Tree started in 2009 in Knoxville, Iowa, and expanded to Des Moines in 2016. They are one of Iowa’s first craft breweries and the first 100% woman-owned brewery in the state! Their Des Moines tap room features 23 regularly rotating beers, guest cider, beer cocktails, wine by the glass, tea, and root beer. Drinks will be available for purchase.

View the Tour 3 Agenda at www.swcs.org/23ACTours.

WEDNESDAY, AUGUST 9, 2023				
7:30 AM - 12:00 PM	Registration Desk Open			Main Level Memorial Hall
7:00 AM - 8:30 AM	Morning Coffee and Light Breakfast			Main Level Grand Concourse
8:00 AM - 4:00 PM	Tour 1: Voyage through Town, Country, and History (ticket required, additional fees apply) (meet at 7:40 AM)			Meet on Main Level Memorial Hall
8:30 AM - 10:00 AM	SYMPOsia SESSIONS			
Main Level Room 312 Conservation Models, Tools, and Technologies	USDA Climate Hubs: Translating Science into Action for Climate-Smart Agriculture and Decision-Making - <i>Laurie W. Nowatzke, USDA ARS</i>			
Main Level Room 313 Cultivating Conservation Technical Assistance, Community, and Networks	Municipal-Agriculture Partnerships: A Tale of Three Cities - <i>Todd Peterson and Craig Ficenec, Sand County Foundation</i>			
Main Level Room 314 Outreach, Education, and Community Engagement	Women Influencing USDA's Climate Response - <i>Christine Hall, WIn</i>			
Main Level Room 315 Soil Health Resources, Indicators, Assessment, and Management	A Science-Based Framework to Scale Soil Health Assessment: Standardized Procedures, Recommended Measurements, and Local Interpretations - <i>Adebukola Dada, Soil Health Institute</i>			
8:30 AM - 10:00 AM	ORAL PRESENTATIONS			
	8:30 AM	8:53 AM	9:16 AM	9:39 AM
Main Level Room 316 CEAP Showcase	Conservation Effects Assessment Project: Evaluation of Cover Crop Use in Cultivated Cropland Rotations in the United States - <i>Candiss Williams, USDA NRCS</i>	Quantifying Long-Term Regional Groundwater Quality Benefits from Good Agricultural Practices - <i>Thomas Harter, University of California Davis</i>	Temperature, Precipitation, and Discharge Trends in Mark Twain Lake Watershed - <i>Claire Baffaut, USDA ARS</i>	Water Quality Responses to Varying Flood Conditions in a Conservation Effects Assessment Project Agricultural Watershed with Multiple Conservation Practices - <i>Richard E. Lizotte, USDA ARS</i>
Main Level Room 317 Climate-Smart Agriculture	Challenges and Opportunities to Transition to Climate-Smart Agriculture in the Inland Pacific Northwest - <i>Erin S. Brooks, University of Idaho</i>	Environmental Markets: From Program Chaos to Systems Change - <i>Michelle Perez, American Farmland Trust</i>	Impacts of the Extreme Weather, Risk Management, Conservation Nexus on Agricultural Lands of the Inland Pacific Northwest - <i>Alex Ayers, University of Idaho</i>	Risk and Ambiguity Aversion in Conservation Practice Adoption and the Effectiveness of Carbon Payment Systems - <i>Zhushan Du, Iowa State University</i>
Main Level Room 318 Edge-of-Field Practices and Monitoring	Assessing the Value of a Public-Private Partnership to Target Best Management Practices to Legacy-Phosphorus Fields - <i>Jay Martin, Ohio State University</i>	Crop and Water Monitoring Networks with Low-Cost Technology - <i>Ansley J. Brown, Colorado State University</i>	Estimating the Soil Water Retention Using Particle-Size Distribution of Sand Soils - <i>Judyson de Matos Oliveira, University of Florida</i>	Missing the Trees for the Forest? Specialized Native Pollinator Biodiversity in Support of Conservation in Agriculture - <i>Scott D. Longing, Texas Tech University</i>
Main Level Room 319 Water Resource Assessment and Management	Evaluating a Two-Stage Roadside Ditch Design to Improve Environmental Performance using 2D Modeling in HEC-RAS - <i>Ingrid Cintura, Iowa State University</i>	Integrating ANNs Predicted Saturated Hydraulic Conductivity and Evapotranspiration to Optimize Drainage System Design - <i>Murad Eliafi, Cranfield University</i>	Mapping the Spatial Distribution of Natural Infrastructure Practices in the Mississippi River Basin - <i>Elliot S. Anderson, University of Iowa</i>	Rural Landowners: Key Partners in Successful Invasive Species Management in Wetland Restorations - <i>Bailey Griffin and Chuck Brandel, ISG</i>

WEDNESDAY, AUGUST 9, 2023				
10:00 AM - 10:30 AM	Morning Break			Main Level Grand Concourse
10:30 AM - 12:00 PM	SYMPOsia SESSIONS			
Main Level Room 312 Climate-Smart Agriculture	Opportunities for Climate-Smart Agriculture to Produce Scope 3 Impact Units - <i>Jack Jeworski, ESMC</i>			
Main Level Room 313 Conservation Economics and Policy	Climate Change Impacts on Soil, Water, and Biodiversity Conservation - <i>Jean L. Steiner, Kansas State University</i>			
Main Level Room 314 Edge-of-Field Practices and Monitoring	STRIPS: 15 Years of Research and Implementation - <i>Tim Youngquist, Iowa State University/STRIPS</i>			
Main Level Room 315 Soil Health Resources, Indicators, Assessment, and Management	Assessing Soil Health on Range and Pasture - <i>Stanley Boltz, USDA NRCS</i>			
10:30 AM - 12:00 PM	ORAL PRESENTATIONS			
	10:30 AM	10:53 AM	11:16 AM	
Main Level Room 316 Adaptive Management of Conservation Efforts	Climate-Smart Agriculture for Subsoil Carbon Storage in the Southeast United States - <i>Sindhu Jagadamma, University of Tennessee</i>	Evaluation of Watershed Indicators and Trade-Offs in Ecosystem Functions Pre- and Post-Industrial Solar Farm Installation - <i>Benjamin Turner, Texas A&M University-Kingsville</i>	Why Do Water Users in the Lower Rio Grande Valley Operate Independently Rather Than Collectively Despite Shared Water Resource Challenges Involving Future Availability? - <i>Benjamin Turner, Texas A&M University-Kingsville</i>	
Main Level Room 317 Conservation Models, Tools, and Technologies	A GIS-Based WEPP Modeling Approach to Locate and Quantify Vulnerable Fields Prone to Hillslope Soil Loss at the HUC12 Level - <i>Eduardo Luquin, Iowa State University</i>	Automation of Lateral Move Irrigation System for Irrigating Cotton Using Wireless Soil Moisture Sensors Network - <i>Udayakumar Sekaran, Oregon State University</i>	Developing Quantitative Cropland State-and-Transition Models Using Bayesian Network Analysis - <i>Jonathan J. Maynard, USDA NRCS</i>	
Main Level Room 318 Cultivating Conservation Technical Assistance, Community, and Networks	Accelerating Progress toward Agricultural Water Quality Goals: Insights from a Technical Assistance Network Approach in the Chesapeake Bay Watershed - <i>Kristin Fisher, The Nature Conservancy</i>	Promoting Adoption of Innovative Precision Ag Nitrogen Management Technologies through the Nebraska On-Farm Research Network: Precision Nitrogen Management for Wheat Case Study - <i>Jose Guilherme Cesaria Pereira Pinto, University of Nebraska-Lincoln</i>	Working with the Agricultural Community to Focus Practices for Watershed Phosphorus Reductions - <i>Jay Martin, Ohio State University</i>	
Main Level Room 319 Social Sciences Informing Conservation	A "Stepladder" toward Adoption of Multiple Complementary Conservation Practices: Iowa Farmers' Concurrent Use of No-Till, Cover Crops, and Extended Rotations - <i>Laurie W. Nowatzke, USDA ARS</i>	Investigating Physical and Behavioral Drivers of Nutrient Loading Using a Farmer Survey - <i>Andrew Hillman, University of Wisconsin-Madison</i>	Our Daily Bread in the Heartland: Understanding Farmer Diversification to Small Grains in Corn and Soybean Systems - <i>Lauren S. Asprooth, University of California, Davis</i>	
1:00 PM - 5:00 PM	Tour 2: Generational Women in Agriculture Tour (ticket required, additional fees apply) (meet at 12:40 PM)			Meet on Main Level Memorial Hall
1:00 PM - 5:00 PM	Tour 3: Downtown Des Moines Walking Tour (ticket required, additional fees apply) (meet at 12:40 PM)			Meet on Main Level Memorial Hall



Conservation incentives made easy.

As you work with producers on their conservation plans, consider the ADM re:generations™ program. It rewards producers up to \$25/acre for cover crops, and, unlike many other carbon programs, it even rewards them for existing practices. In addition, there's an option for single year enrollment and requirements for the program are simple and compatible with many public programs.

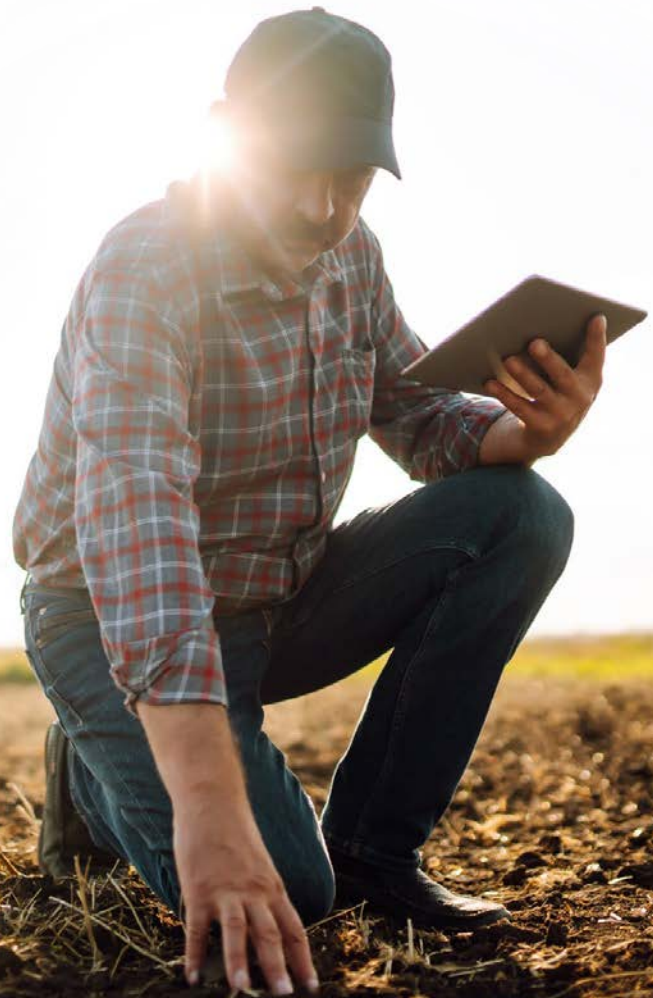
Working with Technical Assistance partners in multiple states, we compensate producers for adopting and implementing climate-smart agriculture practices like cover crops, reduced tillage and nutrient management.

Stop by our booth during the Soil and Water Conservation Society conference for more details on how your producers might benefit. Or for program questions or consultation on expected payments and qualifications, contact:

Theodore Gunther
theodore.gunther@adm.com
(515) 300-5439

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2023 SWCS AWARDS AND SCHOLARSHIPS

INDIVIDUAL AWARDS

Hugh Hammond Bennett Award

The Society's most prestigious award, recognizes extraordinary accomplishments in the conservation of soil, water, and related natural resources.

Dale Threatt-Taylor



Dale Threatt-Taylor is recognized for her major contributions to the conservation of natural resources through this prestigious award.

Her career began as a soil conservationist with the USDA Natural Resources Conservation Service. She later joined the Wake Soil and Water Conservation District (SWCD) as a conservation technician and progressively moved into one of the natural resource conservationist positions. In 2008 she was selected as district director of Wake SWCD and Wake County Soil and Water Conservation Department.

In her current role as The Nature Conservancy's South Carolina executive director, she is building new relationships between natural resource conservationists and environmentalists across the nation. Threatt-Taylor believes locally led conservation begins with an individual and that our collective efforts are key to protecting the lands and waters on which all life depends.

She received a Bachelor of Science degree in conservation from North Carolina State University and a Master of Environmental Management degree from Duke University in 2011. In 2012, she was selected as one of 30 agriculturalists in North Carolina to

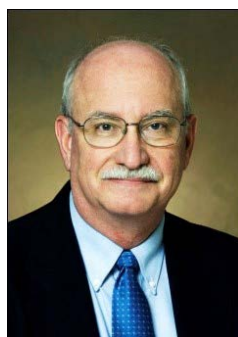
participate in the Agricultural Leadership Development Program at North Carolina State University.

Over the years, she has served in several organizations, and, most importantly to SWCS, she served as chair of the national Board of Directors from 2020 to 2022. Threatt-Taylor has received numerous awards, including the Order of the Long Leaf Pine from North Carolina Governor Roy Cooper for her dedicated work in conservation.

Throughout her career, she has led with an infectious positive and brilliant demeanor that excites a room and elevates any project she touches. We are grateful for her leadership within SWCS and in the conservation field at large. She is a well-deserving recipient of the Hugh Hammond Bennett Award.

Fellow Award

In recognition of SWCS members who have performed exceptional service in advocating the conservation of soil, water, and related natural resources. Fellowship is an honor bestowed upon the best in the conservation profession.



Larry Cihacek

Larry Cihacek has been a member of SWCS since 1989. He has spent much of his career advocating soil, water, and land conservation practices to sustain or improve the land's productive capacity and enhance the environment. Cihacek began working in 1986 on soil erosion

and productivity of eroded soils. His work expanded to include efficient nutrient management for specialty crops, such as crambe and carrots, and he taught a course on saline and sodic soils at North Dakota State University (NDSU). He continues to provide soil-water compatibility determinations for irrigation water samples that are submitted to the NDSU lab by farmers. Cihacek's work with soil testing has resulted in collaborations with researchers developing precision farming techniques that have resulted in numerous publications and presentations. His collaboration with USDA NRCS in developing nutrient management guidelines for North Dakota was a major achievement,

and those guidelines are still used by state environmental regulators in developing and approving land application permits for bio-solid wastes and manure. Most recently, a portion of his work has been focused on low soil pH across North Dakota. All in all, Cihacek's research and educational efforts have been focused on users (farmers, landowners, consultants, and agency field personnel) to provide practical, simple, and relevant knowledge and techniques that can be readily implemented. His contributions to conservation and nutrient management issues have been extremely useful and have provided clear and simple approaches in dealing with a wide range of soil, water, and land management issues. He has shown a superior commitment to SWCS and the North Dakota Chapter of the SWCS where he served in various positions and is currently the secretary/treasurer. For his dedication and achievements throughout his career, Larry Cihacek is highly deserving of the SWCS Fellow Award.



John Gilley

Gilley has over 40 years of experience as a research agricultural engineer with the USDA ARS in Lincoln, Nebraska. He has demonstrated originality and creativity in hydrology, water resources, and soil and water conservation engineering. Gilley's research has contributed

significantly to an improved understanding of the runoff, erosion, hydraulic, and water quality characteristics of upland areas. He has made outstanding contributions in conserving soil and water resources and minimizing environmental degradation while maintaining agricultural sustainability. Gilley has authored or co-authored over 115 refereed journal publications, many technical reports, and numerous papers presented at national or international meetings. Six of his journal articles have received awards. He has national and international stature as evidenced by numerous downloads and citations of his manuscripts and invitations to prepare and present papers. Gilley has been a member of SWCS since 1983. Given his numerous achievements over his career that are too many to list here, John Gilley is more than deserving of this prestigious award.



Maysoon Mikha

Maysoon Mikha is a research soil scientist at the USDA ARS Central Great Plains Research Service, Akron, Colorado. Her professional career spans 41 years, focusing on research, extension, and teaching, first at the Water Resources Research Center, in Baghdad, Iraq, then

Kansas State University, and finally serving in her role with the USDA ARS. Her professional achievements are many and span across research, investigations, outreach/extension, teaching, mentoring, and training. Mikha's research includes long-term tillage practices in Akron, Colorado, on soil aggregation and soil organic matter (SOM) dynamics; a historic long-term manure study near Scottsbluff, Nebraska, looking at deep-tillage impacts on aggregate-associated carbon, nitrogen, and particulate organic matter (POM); impact of cropping intensity, fallow frequency, and tillage practices on soil health in a dryland cropping system; and SOM dynamics in African soils (Lesotho, Africa). Mikha has published more than 50 peer-reviewed journal articles, 8 book chapters, 2 book volumes, and over 60 other scientific articles in proceedings or non-peer-reviewed outlets. She has been an SWCS member since January of 2010 and has served in numerous positions on the Colorado Chapter's Board of Directors and is the current Chair of the SWCS Annual Conference Planning Committee. Maysoon Mikha is more than deserving to receive this prestigious award of Fellow.

Conservation Innovation Award

In recognition of an outstanding activity, product, or service by a group, business, firm, corporation, or organization that promotes natural resource conservation.



The Soil Health Institute

The Soil Health Institute (SHI) is being recognized with the Conservation Innovation

Award for developing a strategy to identify effective and widely applicable measurements of soil health. Improvements in soil health benefit farmers through reduced erosion, increased drought resilience, profitability, nutrient availability, earlier field access, and in some cases, enhanced pathogen suppression. Benefits to the environment include reduced nutrient runoff and leaching, reduced greenhouse gas emissions, increased carbon sequestration, and others.

To address this need, SHI conducted a three-year, \$6.5 million initiative to identify effective and widely applicable measurements of soil health. SHI partnered with over 100 scientists at 124 long-term agricultural research sites in the United States, Canada, and Mexico where conventional management systems were compared with soil health-improving systems. A critical question farmers ask when considering adoption is, “How do I measure soil health?” SHI recommended a minimal suite of three measurements to be widely applied across North America (and likely beyond), including (1) soil organic carbon concentration, (2) carbon mineralization potential, and (3) aggregate stability.

SHI targeted the results to several audiences: the targeting was done to scientists, Certified Crop Advisors, and other consultants, where readers can take a quiz to earn CEU credits. It was also targeted to farmers; and food and beverage, clothing, and other corporations; and finally to laboratories wishing to use these standard operating procedures that were created through this process.

LaKisha Odom, FFAR’s scientific program director for soil health, stated, “Providing a scientifically rigorous, yet practical approach for assessing soil health should increase adoption of regenerative soil health systems because farmers and their advisers can now measure the impact of their management choices with confidence. This will in effect bring more on-farm and environmental benefits to scale for agriculture and society.”

Congratulations to the Soil Health Institute in receiving this year’s Conservation Innovation Award.



The Water Talk Podcast

The Water Talk Podcast is being recognized with the 2023 Conservation

Innovation Award for its service to Californians and surrounding areas through providing diverse information from soil and water leaders and experts throughout the state. The Water Talk Podcast is a timely science-based outreach program that serves a broad audience. The intent of the programming is to provide accessible information about critical issues related to water and soil conservation. This new extension outreach program has quickly filled a gap to supply much needed information across the state.

The podcast has expanded from 330 downloads in 2020 to now over 31,000 downloads in 2023, spanning listeners in California and across the globe. The Water Talk Podcast has contributed to promoting greater awareness and knowledge about better conservation of water, soil, and natural resources along with a better understanding of crucial natural resource conservation issues.

This work is a new type of extension with great promise and reach for people who cannot attend live events but have an interest in learning about soil and water conservation on their own time and terms. The team has recorded, edited, released, and promoted 46 podcast episodes.

Congratulations to the Water Talk Podcast for receiving the Conservation Innovation Award.

Harold and Kay Scholl Excellence in Conservation Award

In recognition of individuals who work on the ground to provide direct and personal delivery or conservation planning and technical assistance.



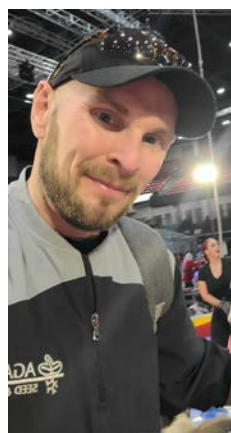
Naeem Kalwar

The 2023 Harold and Kay Scholl Excellence in Conservation Award goes to Naeem Kalwar, soil health extension specialist at North Dakota State University. Kalwar serves on a state-wide

soil health team that focuses on the nearly 44 million acres of saline and/or sodic soils of North Dakota, for which he has become known as the “go-to” person for improving productivity in these soils. In 2014 he established a research and demonstration site to evaluate soil salinity management by drainage and the efficacy of various soil amendments. Since 2015, Kalwar has worked with more than 200 farmers in North Dakota, Minnesota, and South Dakota to improve these soils by evaluating the site-specific issues and mitigating and managing the problems using practices such as soil drainage, reduced tillage, saline tolerant crops, and cover crops. He has presented results and provided training from his work to nearly 2,100 farmers, agricultural advisors, extension, and USDA NRCS professionals. This commitment to working with community members and landowners to preserve natural resources, improve management of saline/sodic soils, and promote conservation initiatives championed by SWCS has done more than enough to make Kalwar deserving of this award.

Conservation Professional of the Year Award

In recognition of outstanding accomplishments in practicing and advancing the science and art of natural resource conservation.



Chris Kappes

Chris Kappes, a representative of Agassiz Seed & Supply, serves a multistate region in the Northern Plains area of the United States. He is a dedicated leader, both within the SWCS and professionally. His accomplishments are proof of this. Kappes is an activist for conservation, promoting the sound scientific practices of soil health and conservation to

agronomists, turf professionals, and other industry professionals. He learns, shares research, directly educates others, and advocates for natural resource conservation through outreach to professionals, being a voice for his chapter, and sharing the work that the SWCS does on the local, state, and national level. He spends countless hours on the road traveling for his job and goes the extra mile to meet people where they

are. Kappes is also a community builder, connecting industry with research and extension, and is an expert at building relationships among his extensive network of agriculture professionals. These meaningful connections help foster the science and art of conservation, not just in North Dakota but worldwide. He currently serves as president for the North Dakota Chapter of SWCS and has also served as a council representative. Through his leadership, the chapter has grown both in numbers and diversity of representation. Kappes has a unique way that motivates and inspires people and community, all while continuing to seek ways to further advance the mission of SWCS across the land and people. It is with great honor that Chris Kappes is presented the Conservation Professional of the Year Award.

Society Service Award

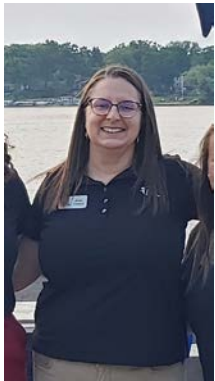
In recognition of Society members for service to their chapter or to the Society.



Jim Culver

Jim Culver is recognized for his service to the Society as a leader and for his service his chapter. Culver has been recognized by the chief of USDA NRCS as a “Million Acre Mapper” and helped lead the effort to secure more than \$15,000 for the

Nebraska contribution to the Smithsonian “Secrets of Soil” traveling education display. He has been the president of the Land of Lincoln SWCS Chapter, where he developed and organized educational programs. Since his retirement from NRCS, Culver has volunteered for the NRCS Earth Team, whose activities advance knowledge by assisting with programs and projects, support educational training, and foster discussions related to natural resources. Culver has also organized a project with the Audubon Spring Creek Prairie and NRCS whereby soil monoliths were collected from major soils at the prairie that are then used for educational training of students, visitors, and conservation resource personnel. He has contributed to and led many other educational and outreach activities through his involvement in the community that support the mission of SWCS. Congratulations Jim Culver, recipient of the 2023 Society Service Award.



Kelly Goward

Kelly Goward is recognized with the Society Service Award for her service to the Michigan Chapter. Goward has served her chapter in multiple leadership roles, including chapter president, past president, chair of the Conference Committee (the chapter hosted the SWCS International Annual Conference in Dearborn in 2009), and treasurer

since 2014. In addition to developing an annual budget and providing monthly and annual financial statements to the executive committee as part of the treasurer role, she also coordinated the establishment of a money market account for chapter funds. Each year, Goward coordinates with vendors to obtain necessary logistical services and cost estimates for chapter professional development activities. She also coordinated efforts to set up an account with a virtual platform for conducting committee meetings. Goward has allocated exceptional time and extraordinary personal effort to ensure that the Michigan Chapter's financial assets are managed and secure, while also providing leadership in the planning and coordination of events hosted by the chapter. Congratulations to Kelly Goward, recipient of the 2023 Society Service Award.



Beth Hill

Beth Hill is recognized with the Society Service Award for her outstanding service to the North Dakota SWCS Chapter. She has served in a leadership capacity to the chapter since joining the Society in 2015, where she has served as council representative and president

and spearheaded seven technical workshops. During the pandemic, Hill developed online engagement activities. One of these "Backyard Conservation" webinars the chapter hosted in 2020 had more than 100 attendees, from 10 states and 9 countries. This webinar was highlighted during the 2021 International SWCS meeting during the "Communicating Conservation during COVID-19" symposium. Hill provides training in soil and forestry conservation to

Envirothon teams from across North Dakota, ensuring the North Dakota SWCS Chapter is educating the next generation of land stewards. She uses her talent as a photographer to document chapter activities. She has also supported other chapter members by submitting nominees for awards and drafting the chapter newsletter. Hill has made a consistent and steady contribution to the South Dakota SWCS Chapter through the years, notably through the COVID-19 pandemic. Congratulations to Beth Hill, recipient of the 2023 Society Service Award.



Claudia Stevenson

Claudia Stevenson is recognized with the Society Service Award for her service to the Nebraska Chapter. Stevenson has served the Nebraska Chapter through various leadership roles, including membership chair for the past 10 years, vice president in 2020, president

since 2021, and serving on the Scholarship, Awards, and Membership Committees. As chapter president, she created a Leadership Handbook for the officers and members of standing committees, which provides a helpful tool for new officers and committee members coming onto the Board. Stevenson put together an ad-hoc committee for reviewing and editing the Nebraska Chapter's bylaws; the committee made recommendations, and the new bylaws were approved by the membership and SWCS Headquarters. She has also been involved with the chapter's annual meetings; she served on the 2022 Annual Meeting Planning Committee and has also created a workbook on how to plan an annual meeting. Stevenson has also been engaging members of the chapter with her ongoing "Spotlight on Members" email campaign, greeting new members, and regularly communicating with the membership. It's easy to see why her colleagues call her "a dynamite SWCS Leader"! Congratulations to Claudia Stevenson, recipient of the 2023 Society Service Award.

Chair's Leadership Award

In recognition of exemplary assistance in helping to carry out the goals and objectives of the Soil and Water Conservation Society.



SWCS Colorado Chapter

SWCS thanks the Colorado Chapter for serving as gracious hosts at the 77th SWCS International Annual Conference

in Denver, Colorado. The Colorado Chapter leaders helped organize a field tour with the US Forest Service to demonstrate wildfire mitigation and recovery efforts in the Denver area. They also served as ambassadors, providing local recommendations to conference attendees. The Society is very grateful for their leadership and commitment to advancing conservation in Colorado.



Gretchen Sassenrath

Gretchen Sassenrath is recognized for her service to the *Journal of Soil and Water Conservation* (JSWC), the Science and Policy Committee, and the Annual Conference Program Planning Committee. Sassenrath, a member of the SWCS Kansas Chapter,

has served on the JSWC Editorial Board since 2015 and as Research Editor since 2021. In this role, she has provided leadership in shortening peer review time, providing page charges waivers to promote equitable access to publishing, creating new policies for Editorial Board, and assisting in the coordination of a special issue, "Climate Change Impacts on Soil and Water Conservation." In addition to her work on the JSWC, Sassenrath actively serves on the SWCS Science and Policy Committee and has advanced several efforts, including the organization of speakers for panels at annual conference, and recruiting a new graduate student liaison for the committee. After becoming committee chair in the fall of 2022, Gretchen has worked hard to expand the committee's role as an

advisory body to SWCS leadership and staff. For these contributions and more, Gretchen Sassenrath is an invaluable SWCS member and well-deserving of the Chair's Leadership Award.

Conservation Research Award

In recognition of Society members or teams of members whose research has led to exceptional improvements in soil conservation, water conservation, and/or related natural resources research.



Girish Panicker

Girish K. Panicker is an authority on C-factor (cover and management) research on horticultural crops and an internationally renowned agricultural scientist (vegetable and fruit crops) at Alcorn State University,

Mississippi. His federally funded research center has the world's largest C-factor data bank on horticultural crops with work done on over 45 crops with more than 140,000 readings at an investment of over \$6.5 million. The enormous amount of information generated is used around the globe for erosion prediction, nutrient management on organic and inorganic farms, conservation planning, and to prevent soil erosion and climate change. Panicker has worked largely in the conservation field on three continents: Asia, Africa, and North America. He is the first scientist to succeed in raising blueberries on heavy soils by animal waste-based organic farming techniques and also the first scientist to increase vitamin C in blueberries to a very high level by organic farming methods. His organic blueberry contains 83% more vitamin C than the blueberries sold in the open market. He is a pioneer in residue management studies on horticultural crops to prevent soil erosion and applying the results of residue decomposition studies on organic plots to avoid groundwater pollution from nitrogenous manures. Congratulations to Girish Panicker!

JOURNAL OF SOIL AND WATER CONSERVATION AWARDS

Best Research Paper for Impact and Quality Award

In recognition for the impact and quality of a research paper published in the Journal of Soil and Water Conservation in the previous five years, as well as an honorable mention.

Best Research Paper for Impact and Quality Award

King, K.W., M.R. Williams, G.A. LaBarge, D.R. Smith, J.M. Reutter, E.W. Duncan, and L.A. Pease. 2018. Addressing agricultural phosphorus loss in artificially drained landscapes with 4R nutrient management practices. *Journal of Soil and Water Conservation* 73(1):35-47. <https://doi.org/10.2489/jswc.73.1.35>.

Best Research Paper for Impact and Quality Honorable Mentions

Smith, D.R., R.S. Wilson, K.W. King, M. Zwonitzer, J.M. McGrath, R.D. Harmel, R.L. Haney, and L.T. Johnson. 2018. Lake Erie, phosphorus, and microcystin: Is it really the farmer's fault? *Journal of Soil and Water Conservation* 73(1):48-57. <https://doi.org/10.2489/jswc.73.1.48>.

Libohova, Z., C. Seybold, D. Wysocki, S. Wills, P. Schoeneberger, C. Williams, D. Lindbo, D. Stott, and P.R. Owens. 2018. Reevaluating the effects of soil organic matter and other properties on available water-holding capacity using the National Cooperative Soil Survey Characterization Database. *Journal of Soil and Water Conservation* 73(4):411-421. <https://doi.org/10.2489/jswc.73.4.411>.

Editor's Choice Award

In recognition of an article of excellence appearing in the "A" Section of the Journal of Soil and Water Conservation in the previous year, as well as an honorable mention.

Editor's Choice Award

Myers, R.L., and J. LaRose. 2022. Comparing cover crop use by horticultural and commodity producers. *Journal of Soil and Water Conservation* 77(1):12A-18A. <https://doi.org/10.2489/jswc.2022.1219A>.

Editor's Choice Honorable Mention

Udawatta, R.P., and C.J. Gantzer. 2022. Soil and water ecosystem services of agroforestry. *Journal of Soil and Water Conservation* 77(1):5A-11A. <https://doi.org/10.2489/jswc.2022.1028A>.

Associate Editor Excellence Award

In recognition of associate editors for their contributions to the success and development of the Journal of Soil and Water Conservation.



Eli Argaman

Eli Argaman has served as an associate editor since 2019. In his time as editor, he has ensured rapid turnaround of reviews, providing authors with prompt and thorough feedback. Additionally, he has assisted the

research editor and other associate editors with the review of challenging manuscripts to stave off delays. His dedication is recognized with the Associate Editor of Excellence Award.



Chunsheng Hu

Chunsheng Hu has served as an associate editor for 14 years and is one of the journal's longest-serving editors. During his tenure, he has managed the review of 50 manuscripts in diverse conservation topics, including cover crops, nutrient

management, and edge-of-field practices. He regularly exceeds journal goal review times so that authors receive feedback quickly. His long-term efforts to support the JSWC and conservation research are recognized with the 2023 Associate Editor Excellence Award.



Thomas Iserloh

Thomas Iserloh joined the JSWC Editorial Board in 2017 and has completed two terms as an associate editor. His expertise in soil erosion processes and land degradation has been valuable to the journal, and he consistently provides authors with high quality

reviews. He has also helped the research editor by providing assistance with difficult assignments. He is well-deserving of the Associate Editor of Excellence Award.

CHAPTER AWARDS

Exceptional Chapter Event Award

In recognition of chapters for significant achievements through a single activity conducted during the year.

- Kansas Chapter – Student Dinner and Professional Development Roundtable
- Land of Lincoln Chapter – Summer Meeting and Field Tour
- Michigan Chapter – ANR Month Seminar – Sustainable Intensification of the Rural Landscape: Protecting Soil Health, Water Quality and Farm Profitability
- National Capital Chapter – Earth Day Cleanup of the Anacostia River
- Nebraska Chapter – Annual Legislative Meeting
- North Dakota Chapter – Connecting Soils, Plants, Animals and Humans in a Changing Environment Webinar
- Southern New England Chapter – Summer Meeting and Field Tour: Watershed and Wastewater Management
- Wisconsin Chapter – Fall Conservation Tour of Dunn County

Outstanding Chapter Award

In recognition for the chapter's success in carrying out its overall program during the past year.

- Arizona Chapter
- California/Nevada Chapter
- Hoosier Chapter
- Iowa Chapter
- Kansas Chapter
- Michigan Chapter
- National Capital Chapter
- Nebraska Chapter
- South Dakota Chapter
- Southern New England Chapter

SCHOLARSHIPS

Melville H. Cohee Student Leader Conservation Scholarship

Provides financial assistance to members of SWCS who are in their junior or senior year of full-time undergraduate study or are pursuing graduate level studies with a natural resources conservation orientation at a properly accredited college or university.



Diego Della Lunga

Diego Della Lunga is currently pursuing a PhD in environmental dynamics at the University of Arkansas. A first-generation college student from Italy, Della Lunga started his BS in Florence, Italy. After a 15-year break, he decided to continue his education in the United States.

When he first arrived at the University of Arkansas at Little Rock in fall of 2014 he did not speak any English and focused on English language learning courses. He took core classes in the spring of 2015, after which he transferred to the University of Arkansas-Fayetteville campus, where he earned a BS in agricultural, food, and life sciences (with highest distinction), majoring in environmental, soil, and water science. He continued to graduate school, earning a master's degree in crop, soil, and environmental science, graduating with a 4.0 grade point average. As a graduate student, Della Lunga taught environmental science labs, going above and beyond to help students. In addition to rave reviews from his students, he was awarded the CSES (Crop, Soil, and Environmental Science) Outstanding Graduate Student in Teaching and Mentoring. He is currently two years into his PhD program. He is now a dual citizen, a Doctoral Academy Fellow, and still maintaining a 4.0 GPA. Della Lunga is an accomplished author, having published, to date, seven refereed manuscripts as first author and two more as a co-author, and has earned several awards for both posters and oral presentations at several different professional conferences. His professors commend him on his hard work, academic ability, leadership, integrity, loyalty, good judgment, and respect for others. In his own words, through his teaching and mentoring experience, Della Lunga

has gained understanding about how diversity plays a fundamental role in the process of learning. The challenge of adapting his teaching and mentoring methods to people with diverse backgrounds has enhanced his path towards an academic career. He writes, "As a nontraditional student, I have learned first-hand that life isn't about what happens to you, it's about how you choose to respond." His greatest desire before his academic chapter ends is to pass his skills and experience to the next group of international, nontraditional, returning, transfer students. Della Lunga has met challenges head-on, persevered, overcome, and encouraged others along the way. He is a true student leader in conservation and in life and absolutely deserving of this scholarship. Congratulations!

Kenneth E. Grant Scholarship

Provides financial aid to members of the SWCS for interdisciplinary graduate-level research on a conservation topic that will extend the SWCS mission of fostering the science and the art of soil, water, and related natural resource management research.



Judyson de Matos Oliveira

Judyson de Matos Oliveira is a student member of SWCS and is currently pursuing his PhD with the Horticultural Department at the University of Florida. His area of expertise is

soil, water, and nutrient management for vegetable production. De Matos Oliveira is currently working with modeling soil physical-hydrological processes. His research is sponsored by the Florida Department of Agriculture and Consumer Services and focuses on irrigation automation to improve the efficiency of water and fertilizer use. Prior to his current research at the University of Florida, he studied at the Federal University of Viçosa and Federal University of Recôncavo da Bahia in Brazil. Judyson de Matos Oliveira is well deserving of this scholarship.

WiN AWARDS

WiN Conservationist of the Year Award

In recognition of an outstanding woman farmer/producer/conservationist and demonstrates a vital role in supporting women in agriculture and conservation.



The 3 Calhoun Sisters – Nancy Calhoun Mueller, Susie Calhoun, and Merry Calhoun Carter

The 3 Calhoun Sisters own and manage a small cattle ranch east of the San Francisco Bay Area,

located in Alameda County, California. The sisters are active participants in programs through NRCS and the local resource conservation district. They are forward-thinking, strong women who are working hard to demonstrate the beautiful balance of natural resource conservation and agriculture.

A main focus of the Calhoun Sisters' efforts has been on creating and improving habitat for monarch butterflies and other pollinator species on working rangeland. These efforts also include education to other ranchers and private landowners about monarchs and pollinators. The sisters hosted approximately 50 wildlife professionals through a Grassland Butterfly Workshop held by the San Francisco Bay Chapter of the Wildlife Society and the Alameda County Resource Conservation District (RCD). Two weeks later they hosted a smaller workshop focused on monarch butterflies with an audience of local private landowners and ranchers.

The 3 Calhoun Sisters' ranch has also been a demonstration site for Carbon Farm Planning. These planning efforts have resulted in implementation of compost spreading trials to enhance carbon sequestration. Their curiosity and ongoing quest to continue learning about the natural resources on their ranch is rewarding for the local NRCS and RCD Team.

Nancy, Merry, and Susie have a deep love for natural resources and agriculture. Their father was a cattle rancher with an obvious appreciation for the land. Their mom was an artist, historian, and a self-taught naturalist. Those who are lucky enough to meet these ladies and spend time with them on their ranch can see the generational spark and love for the land that shines incredibly bright.

These three sisters exemplify women land managers in agriculture and natural resources management.

Congratulations Nancy, Merry, and Susie!

WiN Past President Award

In recognition and commendation of WiN's Past President for the outstanding contributions made throughout the four-year WiN President track, encompassing a wide array of activities and responsibilities.



Valerie Hartman

Valerie (Val) Hartman has been 100% committed to the president's position and has provided excellent leadership to make WiN the best organization it can be. She has been a solid advocate for WiN, sharing her experiences and offering

guidance to other women from the heart. During Val's year as the WiN President, member numbers grew from 306 to 357, which exemplifies her devotion and the value of her leadership with the Executive Committee.

A major accomplishment of Val's was the onset of the WiN Mentoring Program. Under her leadership and the strong desire of committed women, the WiN Mentoring Committee was organized and created the now very-popular WiN Speed Mentoring Events and WiNning in Conservation Mentoring Program. Because of this successful program, 105 WiN members have enrolled as either a mentor, mentee, or both.

Val's continued work with the 2021–2026 WiN Strategic Plan ensured that WiN maintained focus on the goals and objectives as identified in the newly developed plan. Val further highlighted her ability to lead by ensuring WiN utilized the annual WiN Business Plan to implement WiN's updated bylaws, policy, as well as the Strategic Plan. Under her leadership, she provided excellent guidance to ensure the integrity and accountability of the WiN National Council and the WiN organization.

During Val's year as president, each WiN Weekly email she sent out included an "inspirational word-of-the-week." These clever inspirational words, arranged alphabetically, included a definition and then an example of how we can use that word in our professional and personal lives. Her final word at the end of her

Presidency was Zen; reminding members they deserve to allow themselves time for peace and relaxation.

Overcoming the challenges of work-life balance and going further to selflessly volunteer her time and remarkable talents to WiN, we can easily say "Val, you are more than deserving to feel "Zen." Thank you and congratulations also on your retirement from NRCS!

WiN Individual Award of Excellence Recipient

In recognition of an individual who, over a period of time, has contributed substantially and creatively to our natural resources conservation profession. The recipient should exemplify excellence in a particular discipline and, possibly, multidiscipline efforts that promote excellence and creativity. The recipient should also demonstrate involvement in WiN.



Elizabeth Oolman

Elizabeth Oolman is a fantastic agricultural engineer for the NRCS, and she takes it two steps further without ever being asked to do so! As young women, working in the engineering sphere can be

intimidating. However, seeing another Elizabeth, who is so intelligent, capable, and driven serving on the state office staff has been so encouraging to young women. It is amazing how Elizabeth has the time every day to accomplish everything that she does!

No matter the size of the question, Elizabeth is ready to help you, and she makes you feel like a priority while doing it. She is very thoughtful and intentional with her actions. She has taken the young engineering women under her wing and has been so excited about it. As an example, she recently brought hand wipes to a fellow geologist and another engineer because she noticed that they didn't have any. Those small actions mean the most, because it she shows how much she cares about creating an environment where women thrive and feel seen in our industry.

Professionally, Elizabeth has been a great engineer! She has had a hand in creating many of the engineering calculation spreadsheets that are used in Minnesota, regularly updates the practice standards, and is ready and willing to jump in on any project that needs extra

attention. She is constantly asking others if they need help. She is so passionate about engineering and conservation and is always working on a way to make things better for those around her.

Congratulations and thank YOU, Elizabeth!

WiN Group Award of Excellence Recipient

In recognition of a group who, over a period of time, has contributed substantially and creatively to our natural resources conservation profession. The group should exemplify excellence in a particular discipline and, possibly, multidiscipline efforts that promote excellence and creativity.

WiN Mentoring Committee Members: Karma Anderson, Katherine Burse, Madeline Cantu, Katie Cerretani, Kristin Graham Chavez, Roylene Comes at Night, Bethany Munoz Delgado, Bianca Diaz Deliz, Margaret Gannon, Christine Hall, Nicole Kubiczki, Francine Lheritier, Julie MacSwain, Han Nguyen, Heidi Ramsey, Heather Medina Saucedo, Cheryl Simmons, Kara Vigneau, and April Wilson

The WiN Mentoring Committee organized WiN Speed Mentoring Events and WiNning in Conservation. The committee paired mentors and mentees based on input given. This is the first time WiN has developed a mentoring program. The program was developed to meet WiN's mission and to address a top request from WiN members—connecting WiN members to each other and address their personal goals.

The Mentoring Committee met monthly to develop the foundation for what was envisioned to be a successful program for WiN members. Surveys were developed and analyzed. Mentoring program guides and agreements were created, and training was presented.

Supporting WinNers in Conservation Mentoring Program was rolled out in January of 2023. A total of 105 individuals signed up for this new program as either a mentor, mentee, or both. All 77 WiN members seeking mentors were paired up with a mentor.

The WiN mentoring committee continues to provide support via the WiN teams mentoring channel for mentors.

Congratulations WiN Mentoring Committee Members!

WiN Outstanding Member Award

The Outstanding Member Award is the highest recognition given by the members themselves to one of their members. The purpose of the award is to recognize excellence in professionalism and leadership as a WiN member. It is based on achievements in WiN over an extended period of years and on participation and support of its mission.



April Wilson

April Wilson has been a member of WiN for many years and has been a very active member of multiple committees. She recently finished her term as the organization's secretary in

2022. As the WiN secretary, April was the chair of the Communications Committee, which until 2022 included all the subcommittees that are now broken out into the Education and Advocacy Committee as well.

As secretary, she was very aware of our policies and bylaws, kept the board on task with her knowledge of parliamentary procedure, and was almost always able to fill in the questions about the historical "whys" behind our processes and expectations.

April has also served on the WiN Barriers Assessment Initiative and leads our In It to WiN It activities providing quality information to our members through that series every two months.

She is a wonderful asset to the organization and is someone that almost all our members are familiar with since she has served as our Zoom guru for the past many years.

These are only just a few of the many ways that April has been involved in the organization, the National Council, and some of our key committees in recent history. She has done so much for NRCS and WiN and is greatly appreciated.

Congratulations and thank YOU, April!

JOIN SWCS IN MYRTLE BEACH, SOUTH CAROLINA

79TH SWCS INTERNATIONAL ANNUAL CONFERENCE

JULY 21-24, 2024



SOIL
AND WATER
CONSERVATION
SOCIETY

SWCS CONFERENCE SITES AND CHAIRS

1946	Chicago, IL, Ralph H. Musser	1986	Winston-Salem, NC, Joe D. Nichols
1947	Omaha, NE, Ralph H. Musser	1987	Billings, MT, Maurice G. Cook
1948	Cincinnati, OH, T.S. Buie	1988	Columbus, OH, Donald Van Meter
1949	St. Louis, MO, Lloyd E. Partain	1989	Edmonton, AB, David R. Cressman
1950	Detroit, MI, Firman E. Bear	1990	Salt Lake City, UT, Richard Duesterhaus
1951	Memphis, TN, Morris E. Fonda	1991	Lexington, KY, Richard Duesterhaus
1952	Buffalo, NY, Morris E. Fonda	1992	Baltimore, MD, Ronald J. Hicks
1953	Colorado Springs, CO, H.H. Bennett	1993	Fort Worth, TX, Ronald J. Hicks
1954	Jacksonville, FL, R.Y. Bailey	1994	Norfolk, VA, Calvin J. Perkins
1955	Green Lake, WI, Austin L. Patrick	1995	Des Moines, IA, Gary Steinhardt
1956	Tulsa, OK, Edward H. Graham	1996	Keystone Resort, CO, John A. Knapp
1957	Pacific Grove, CA, J.S. Russell	1997	Toronto, ON, Aniko Szojka-Parnell
1958	Asheville, NC, Russell G. Hill	1998	San Diego, CA, Aniko Szojka-Parnell
1959	Rapid City, SD, Alvin C. Watson	1999	Biloxi, MS, Dennis Pate
1960	Guelph, ON, Elmer L. Sauer	2000	St. Louis, MO, Dennis Pate
1961	Lafayette, IN, Walter C. Gumbel	2001	Myrtle Beach, SC, Dana Chapman
1962	Washington, DC, Roy D. Hockensmith	2002	Indianapolis, IN, Bob Eddleman
1963	Logan, UT, George M. Browning	2003	Spokane, WA, Myron Senechal
1964	Jackson, MS, Herbert A. Hopper	2004	St. Paul, MN, Deborah Cavanaugh-Grant
1965	Philadelphia, PA, Minott Silliman, Jr.	2005	Rochester, NY, Jean Steiner
1966	Albuquerque, NM, John R. J. Bradshaw	2006	Keystone, CO, Jean Steiner
1967	Des Moines, IA, Cecil W. Chapman	2007	Tampa, FL, Theo Dillaha
1968	Athens, GA, Frank H. Mendell	2008	Tucson, AZ, Peggie James
1969	Fort Collins, CO, Ray Hunter	2009	Dearborn, MI, Peggie James
1970	Toronto, ON, Robert W. Eikleberry	2010	St. Louis, MO, Gary Steinhardt
1971	Columbus, OH, Einer L. Roget	2011	Washington, DC, Bill Boyer
1972	Portland, OR, J.R. Johnston	2012	Fort Worth, TX, Bill Boyer
1973	Hot Springs, AR, A.B. Linford	2013	Reno, NV, Dan Towery
1974	Syracuse, NY, William L. Vaught	2014	Chicago, IL, Dan Towery
1975	San Antonio, TX, Frank W. Schaller	2015	Greensboro, NC, Mark Berkland
1976	Minneapolis, MN, Chester E. Evans	2016	Louisville, KY, Mark Berkland
1977	Richmond, VA, J. Vernon Martin	2017	Madison, WI, Jon Scholl
1978	Denver, CO, Arthur D. Latornell	2018	Albuquerque, NM, Rex Martin
1979	Ottawa, ON, William Moldenhauer	2019	Pittsburgh, PA, Rex Martin
1980	Dearborn, MI, Gerald R. Calhoun	2020	Virtual Event, Rex Martin
1981	Spokane, WA, Jesse L. Hicks	2021	Virtual Event, Dale Threatt-Taylor
1982	New Orleans, LA, Robert C. Baum	2022	Denver, CO, Dale Threatt-Taylor
1983	Hartford, CT, Chris J. Johannsen	2023	Des Moines, IA, Rebecca Power
1984	Oklahoma City, OK, Floyd E. Heft	2024	Myrtle Beach, SC, Rebecca Power
1985	St. Louis, MO, Roland R. Willis		