



ELEVATING

77th SWCS International Annual Conference
Denver, Colorado | July 31-August 3, 2022

Conservation


TO NEW HEIGHTS

CONFERENCE 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 "77th SWCS International Annual Conference."

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CONFERENCE PROGRAM

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CONFERENCE SCHEDULE IN BRIEF

All sessions are included with conference registration unless otherwise indicated.

SUNDAY, JULY 31

- 11:00 AM – 5:00 PM** Registration Desk Open
Registration Area on Lower Level 2
- 12:15 PM – 12:45 PM** New Member and First Timer Orientation
Matchless on Lower Level 1
- 1:00 PM – 3:00 PM** *Workshop 1: LandPKS—Mobile App for Soil Identification, Wildlife Habitat Information, and Soil Health and Vegetation Monitoring
Mattie Silks on Lower Level 1
- 1:00 PM – 3:00 PM** *Workshop 2: Measure the Impacts of Your Science-Based Approach to Farm Conservation
Penrose 1 on Lower Level 1
- 1:00 PM – 4:00 PM** *Workshop 3: Elevating Conservation Outreach through Improved Messaging
Penrose 2 on Lower Level 1
- 1:00 PM – 4:00 PM** *Workshop 4: Leveraging Decoloniality and Anti-Racism as Frames for Equitable Community Partnership in Sustainability Efforts
Independence on Lower Level 1
- 4:00 PM – 5:00 PM** Student and Early Career Professional Development Session
Matchless on Lower Level 1
- 5:00 PM – 6:30 PM** Local Forum and Flavor Reception
Colorado Ballroom F-J on Lower Level 2

MONDAY, AUGUST 1

- 6:30 AM – 5:00 PM** Registration Desk Open
Registration Area on Lower Level 2
- 7:00 AM – 8:30 AM** State of the Society Address to the House of Delegates and Regional Sessions (for Current and Prospective Chapter Leaders and Members)
Colorado Ballroom F-J on Lower Level 2
- 8:30 AM – 10:00 AM** Conference Kickoff, Keynote Sponsor, and Pritchard Keynote Lecture
Colorado Ballroom F-J on Lower Level 2
- 10:00 AM – 10:30 AM** Morning Break: Exhibit Hall and Poster Presentations Open
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2
- 10:30 AM – 12:00 PM** Concurrent Sessions
See pages 27-29
- 11:00 AM – 1:30 PM** *Association of Retired Conservation Service Employees (ARCSE) Annual Meeting (Partner Event) (Offsite)
Ritz-Carlton, The Hall of Fame Room, 1881 Curtis Street
- 12:00 PM – 1:30 PM** Lunch on Your Own
- 1:30 PM – 3:00 PM** Concurrent Sessions
See pages 27-29
- 3:00 PM – 3:30 PM** Afternoon Break: Exhibit Hall and Poster Presentations Open
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2
- 3:30 PM – 5:00 PM** Concurrent Sessions
See pages 27-29
- 5:00 PM – 7:00 PM** Exhibitor and Poster Reception
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2



TUESDAY, AUGUST 2

7:30 AM – 5:00 PM Registration Desk Open
*Registration Area on
Lower Level 2*

8:00 AM – 10:00 AM Opening Remarks and
Colorado Ballroom Plenary Session
F-J on Lower Level 2

10:00 AM – 10:30 AM Morning Break: Exhibit Hall and
Colorado Ballroom Poster Presentations Open
*A-E and Denver
Ballroom 1-4 on
Lower Level 2*

10:30 AM – 12:00 PM Concurrent Sessions
See pages 40-42

12:00 PM – 1:15 PM Awards Luncheon
Colorado Ballroom
F-J on Lower Level 2

1:30 PM – 3:00 PM Concurrent Sessions
See pages 40-42

3:00 PM – 3:30 PM Afternoon Break: Exhibit Hall and
Colorado Ballroom Poster Presentations Open
*A-E and Denver
Ballroom 1-4 on
Lower Level 2*

3:30 PM – 5:00 PM Concurrent Sessions
See pages 40-42

5:00 PM – 6:30 PM Women in NRCS (WiN) Annual
Pomeroy on 3rd Floor Meeting (Partner Event)

WEDNESDAY, AUGUST 3

7:00 AM – 12:00 PM Registration Desk Open
*Registration Area on
Lower Level 2*

8:00 AM – 4:00 PM *Tour 1: Wildfire Mitigation and
Meet at California Recovery in Colorado
*Street Entry on Lobby
Level at 7:40 AM*

8:30 AM – 10:00 AM Concurrent Sessions
See pages 50-51

10:00 AM – 10:30 AM Morning Break

10:30 AM – 12:00 PM Concurrent Sessions
See pages 50-51

12:00 PM Conference Adjourns

1:00 PM – 5:00 PM *Tour 2: Women in Agriculture
Meet at California Tour
*Street Entry on Lobby
Level at 12:40 PM*

1:00 PM – 5:15 PM *Tour 3: Downtown Denver
Meet at California Conservation Walking Tour
*Street Entry on Lobby
Level at 12:40 PM*

1:00 PM – 5:00 PM USDA Conservation Effects
Denver Ballroom 1-3 Assessment Project (CEAP)
on Lower Level 2 Watershed Assessment Studies
Annual Meeting (Partner Event)

WEEK OF AUGUST 22

**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 77th International Annual Conference of the Soil and Water Conservation Society in Denver, Colorado. After two years of virtual conferences, I'd like to welcome you to this grand location to discuss big ideas in person.

This majestic conference city offers an opportunity for the global conservation community to come together and discuss conservation efforts in a unique but illustrative location. Denver, Colorado, on the Front Range of the Rocky Mountains, sits at the confluence of multidimensional resource and conservation concerns and opportunities. Challenges include understanding the diverse agroecological potentials of plains and mountains, and balancing limited resources between agriculture and urban development, as well as responding to immediate concerns of water availability and wildfire.

Our conference theme, "Elevating Conservation to New Heights," emphasizes both our location next to the Rocky Mountains and our aspirations as conservation professionals. I think you'll see those elements reflected in our three 2022 special emphasis topics, as well as in the recurring tracks covered under our general conference theme:

- At the Intersection of Agriculture and Conservation
- Climate-Smart Agriculture
- On the Frontier of Conservation in the West
- Adaptive Management of Conservation Efforts
- Conservation Economic and Policy
- Conservation Models, Tools, and Technologies
- Conservation in Organic, Specialty, Small-Scale, or Urban Agriculture
- Outreach, Education, and Community Engagement
- Social Sciences Informing Conservation
- Soil Health Resources, Indicators, Assessment, and Management
- Water Resource Assessment and Management

The program includes: 144 presentations, 53 posters, 4 workshops, and 3 tours. I think we can all find activities to inform, inspire, and empower us to take conservation to the next level.

It was an honor to serve as the program planning committee chair this year. The quality and scope of this year's program is impressive. I truly appreciate the combination of science, policy, and practice in this program and within SWCS in general. This breadth connects the work we do in our small areas of expertise to much bigger and more powerful effects of soil and water conservation than what we could accomplish alone. Thank you to the staff, members, volunteers, and sponsors of SWCS for making this conference possible and good luck to Maysoon Mikha, the incoming program chair for the 2023 meeting.

Enjoy the 2022 conference as we all work to elevate soil and water conservation to new heights.

Skye Wills, 2022 Program Planning Committee Chair

*National Leader for Soil Science Research
National Soil Survey Center, USDA NRCS*



WELCOME to COLORADO

The Colorado Chapter of SWCS is honored to welcome the 77th SWCS International Annual Conference to Denver, Colorado. Colorado is known for its spectacular landscapes, wildlife, and the variety of outdoor activities it offers, including hiking, mountain biking, horse riding, skiing, fishing, and hunting.

Receiving statehood 100 years after the signing of the nation's Declaration of Independence, Colorado's nickname became the Centennial State. It has the highest average elevation of any state (6,800 ft) with more than two vertical miles between its lowest and highest points. The Colorado landscape ranges from the wide-open plains to broken mesas to high, snow-capped peaks. The Rocky Mountains have 58 named peaks more than 14,000 ft high, all of them in Colorado with the highest peak of Mt. Elbert at 14,443 ft. Colorado's scenery is a result of the colorful geology that underlies the plains in the east, mountains through the center, and basins and plateaus in the west. Colorado's lowest point, where the Arkansas River flows into Kansas, is still 3,300 ft above sea level.

Colorado is a headwater state, with the majority of our water originating from mountainous peaks, flowing down the Continental Divide, and into our agriculture-sustaining rivers. Colorado is the birthplace of the Rio Grande, Colorado, North and South Platte, Arkansas, San Juan, Dolores, Gunnison, and Yampa rivers. Its rivers flow to 18 other states. Being a headwater state, water conservation and watershed management is crucial to not only Coloradans, but to those 18 other states as well. There are approximately 66.7 million ac in Colorado, of which about 65% are used primarily for rangeland. Colorado rangelands are managed for livestock production, watershed conservation, wildlife habitat, biodiversity, soil health, and recreation.

Land use is diverse across Colorado. The majority of the state is rangeland, with beef serving as our main agricultural commodity. However, several crops are also produced throughout the state. Many well-known crops include our Palisade peaches, Pueblo chilies, Rocky Ford melons, and potatoes from the San Luis Valley. Did you know that the San Luis Valley is the second largest fresh potato growing region in the United States? Our warm daytime temperatures and cool nights are ideal for a variety of other produce including carrots, sweet corn, pumpkins, dry beans, leafy greens, and onions.

Like other western states, Colorado is experiencing challenges in regard to soil and water conservation. For the last several years Colorado has experienced drought conditions that affected the productivity of our rangelands, forest ecosystems, and water resources. Dry conditions and increased temperatures in Colorado have become more severe and frequent resulting in early snowmelt, dry forests, and lower water levels in our reservoirs, lakes, rivers, and streams. To help protect our natural resources the federal, state, and local governments work with conservation groups, such as the SWCS Colorado Chapter, as well as landowners on education and outreach regarding soil and water conservation.

The members of the SWCS Colorado Chapter look forward to participating in the 2022 Annual Conference to learn and share new knowledge and science regarding the conservation of our natural resources. We hope you enjoy our state's many attractions and sample some of our popular microbrews and local food!

Amber Wyndham, President

SWCS Colorado Chapter



CONFERENCE VOLUNTEERS

ANNUAL CONFERENCE PROGRAM PLANNING COMMITTEE

Skye Wills, USDA NRCS
Chair

Maysoon Mikha, USDA ARS
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
On the Frontier of Conservation in the West*

Gretchen Sassenrath, Kansas State University
At the Intersection of Agriculture and Conservation

Heidi Ackerman, Iowa State University
*Climate-Smart Agriculture
On the Frontier of Conservation in the West*

Lexi Clark, Sustainable Agriculture
Initiative Platform
Conservation Economics and Policy

Skye Wills, USDA NRCS
Conservation Models, Tools, and Technologies

Rachel Schattman, University of Maine, and
Catherine DeLong, Iowa State University Extension
and Outreach
*Conservation in Organic, Specialty, Small-Scale, or
Urban Agriculture*

Adam Reimer, National Wildlife Federation
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 COLORADO CHAPTER LIAISONS

Amber Wyndham, University of Colorado at
Colorado Springs, President

Patrick O'Neill, Soil Health Services, PBC,
Past President

Beth Fortman, USDA NRCS, Director at Large

Maysoon Mikha, USDA ARS, East Slope Director

Barbara Gohlke, USDA NRCS, Secretary/Treasurer

Abbie Clapp, USDA NRCS, Webmaster

Thank you to all who assisted
in planning the 77th SWCS
International Annual Conference!





SWCS BOARD of DIRECTORS, OFFICERS, and STAFF

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Chair: Dale Threatt-Taylor
Vice-Chair: Rebecca Power
Secretary: Jane Hardisty
Treasurer: Steve Kadas

NORTHEAST REGION

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NORTH CENTRAL REGION

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Incoming: Roger Wolf 2022–2024

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Keith Berns 2020–2023

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SOUTHWEST REGION

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2022–2025

AT-LARGE

Ellen Gilinsky 2021–2023
Jane Hardisty 2019–2022
Jerry Hatfield 2020–2023
Jason Weller 2020–2023
Incoming: Rebecca Power 2022–2024

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*
Joe Otto, *Special Projects and Partnerships Director/Historian*
Jody Thompson, *Editorial Assistant*
Kailey Thompson, *Student Summer Intern*

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. Our goals for the world's soil, water, and other natural resources cannot be realized without justice, equity, diversity, and inclusion. 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 on Lower Level 2. SWCS staff will be on site to assist you.

REGISTRATION HOURS

Sunday	11:00 AM – 5:00 PM
Monday	6:30 AM – 5:00 PM
Tuesday	7:30 AM – 5:00 PM
Wednesday	7:00 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 Exhibit and Poster Reception, 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, attendees will be required to complete a self-assessed proof of health screening within 24 hours prior to attending the event. A “pass” result is required in order to receive access to the event. Information will be emailed to attendees on Saturday, July 30 with information on completing the health screening.

The event will follow the Denver public health guidelines. As of now, no public health orders are currently in effect

in Denver. 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.

Masks and hand sanitizer will be provided to attendees at the proof of screening checkpoint, and hand sanitizing wipes will be provided throughout the meeting rooms.

INTERNET

Select the “**SWCSAnnualConference**” network, enter “**SWCS@2022!**” as the password when prompted, and complete the required steps to connect to the free internet connection.

LOST AND FOUND

Check with the front desk of the Hilton Denver City Center or at 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 “77th 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

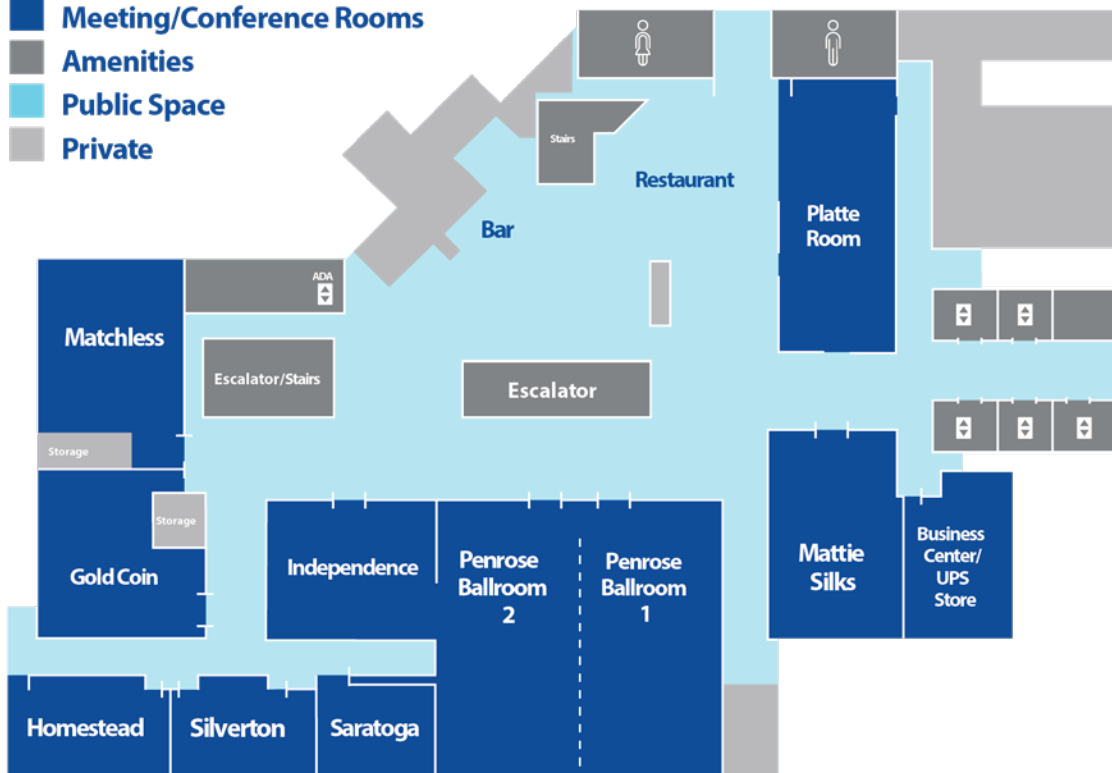
Go to the **Event Game** tab within the event app for instructions on participating in the event game for your chance to win a prize.

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

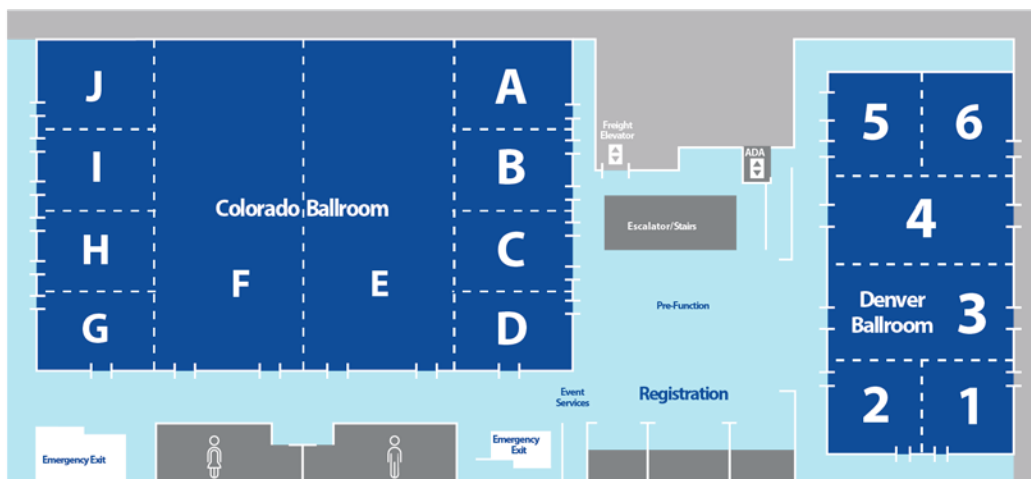
MEETING SPACE MAP

FLOOR MAPS KEY

- Meeting/Conference Rooms
- Amenities
- Public Space
- Private



Lower Level 1



Lower Level 2



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 PARTNER



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 77th 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 SPONSOR



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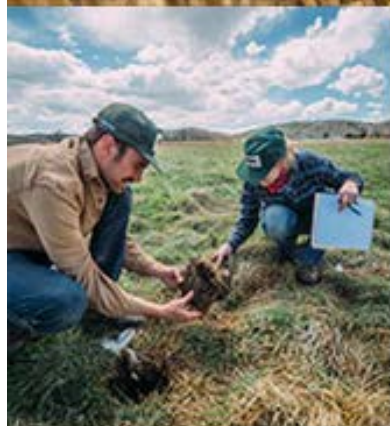


STUDENT LEADER DEVELOPMENT SPONSOR





United States Department of Agriculture
Natural Resources Conservation Service (NRCS)



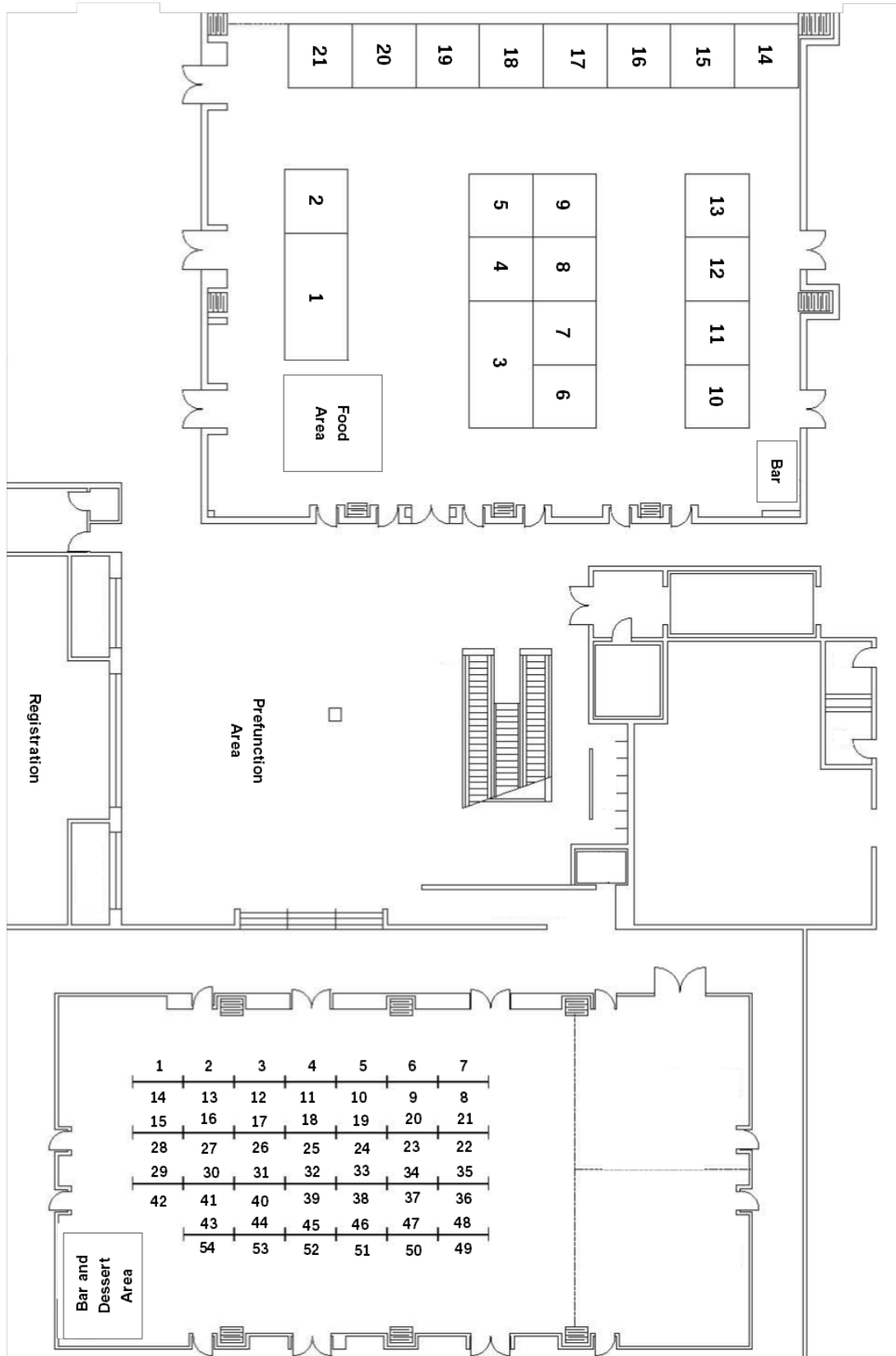
Natural Resources Conservation Service (NRCS)

Helping People Help the Land for over 85 Years.

USDA is an equal opportunity provider, employer, and lender.



EXHIBIT HALL LAYOUT



EXHIBITORS

Booth	Exhibitor	Representatives	Booth	Exhibitor	Representatives
1	Syngenta syngenta-us.com	Chris Tutino and Caydee Savinelli chris.tutino@syngenta.com and caydee.savinelli@ syngenta.com	14	Agri Drain agridrain.com	Stacy Richter stacy@agridrain.com
2	USDA Natural Resources Conservation Service nrcs.usda.gov	Petra Popiel petra.popiel@usda.gov	15	National Association of Conservation Districts nacdn.net	Meg Leader meg-leader@nacdn.net
3	Soil and Water Conservation Society swcs.org	Clare Lindahl clare.lindahl@swcs.org	16	ASA-CSSA-SSSA Publications soils.org	Lauren Matthews lmatthews@ sciencesocieties.org
4	Truterra truterraag.com	Jill Wheeler jwheeler1@landolakes.com	17	Pawnee Buttes Seed Inc. pawneebuttesseed.com	Tanner Clem marketing@ pawneebuttesseed.com
5	American Farmland Trust farmland.org	Kaitlin Downs kdowns@farmland.org	18	Agricultural Water Quality Program, Colorado State University agsci.colostate.edu/ waterquality/	Christina Welch C.Welch@colostate.edu
6	The Nature Conservancy nature.org	Dayana Caero and Valerie Leung dayana.caero@tnc.org and vleung@tnc.org	19	Sustainable Rangelands Roundtable sustainable-range- lands.org	Jessica Windh jlwindh@gmail.com
7	US Environmental Protection Agency epa.gov/nps	Katie Flahive flahive.katie@epa.gov	20	Association of Retired Conservation Service Employees arcse.org	Jack Carlson and Arnold King pspicata@gmail.com and arnolddking@hotmail.com
8	Geosmin Agricultural Solutions geosmin.us	Ashley Hammac ashley.hammac@gmail.com	21	Women in NRCS (WiN) winnrcs.org	Heather Medina Saucedo and Katrina Thompson heather@winnrcs.org and katrina.thompson@ winnrcs.org
9	GO Seed goseed.com	Risa DeMasi rdemasi@goseed.com			
10	Green Cover greencover.com	Keith Berns keith@greencoverseed.com			
11	National Center for Appropriate Technology ncat.org	Jeff Schahczenski jeffs@ncat.org			
12	National Experienced Workforce Solutions newsolutions.org	Tim Forbert tforbert@newsolutions.org			
13	Voss Signs vosssigns.com	Tom Tenerovicz tom@vosssigns.com			



POSTER PRESENTATIONS

Adaptive Management of Conservation Efforts

1. Evaluating the Effectiveness of a “Unique” Agroforestry System for Land Restoration of Degraded Watershed Basin in Southern Guam
2. Kansas NRCS-USDA Plant Materials Center Cereal Rye (*Secale cereale*) Adaptability Study
3. Moving the Needle: A Pilot Watershed Approach to Demonstrate Dissolved Phosphorus Reductions
4. Native Species Seed Establishment Methods
5. Soil Water Depletion and Recharge following Cover Crop Use in Semi-Arid Cotton Production
6. Vegetated Buffers and Their Influence on Fish Habitat in Agricultural Streams in Michigan: Implications for Conservation

At the Intersection of Agriculture and Conservation

7. #Diversecornbelt: Enhancing Rural Resilience through Landscape Diversity in the Midwest
8. Cover Crops and Double Cropping as Sustainable Crop Production Practices for Improving Soil Health and Crop Yields
9. Designing Targeted Conservation Buffers for Water Quality with the Agbufferbuilder Tool
10. Enhancing Conservation Planning to Meet Desired Environmental Outcomes through the Agricultural Conservation Planning Framework National Hub
11. Long-Term Effects of Tillage and Crop Rotation on Soil Carbon and Nitrogen Storage in a Temperate Humid Climate
12. Potential to Use Narrow Rows and Plant Populations to Maximize Harvested Grain or Silage Production while Increasing Irrigated Water and Nitrogen Use Efficiencies in Irrigated Systems
13. Replacing Fallow Periods: Exploring Species and Varieties to “Green” Annual Crop Rotations
14. The Soil Health Assessment Protocol and Evaluation (SHAPE) Version 2.0

15. Using the Agricultural Conservation and Planning Framework (ACPF) in the Southern Piedmont: A Comparison Between ACPF and Local Expert Conservation Practice Selection
16. Utilizing a New ACPF-Compatible Tool and Exploring the Role of Policy in Conservation Implementation in Iowa

Conservation Innovation Grant Showcase

17. A Community-Based Approach to Regenerative Agriculture Technology Development and Dissemination
18. Biocarbon-Driven Dairy Manure Management Demonstration for Enhanced Water Quality
19. Cultivating Conversation: A Pilot Study Using Q Methodology to Understand Information Needs of US Wheat Industry Professionals
20. Demonstrating Phosphorus Adsorbance in a Slag/Biochar Bioreactor Design for the Treatment of Stormwater Runoff
21. Double-Cropping Wheat System Effects on Soil Extracellular Enzyme Activity Related to Carbon and Nitrogen Cycling across Texas
22. Evaluation of Agricultural Nutrient Management Technologies at Vermont Natural Ag Products, Middlebury, Vermont
23. Farmer-Driven Implementation of Soil Health Management Systems Adapted to Diverse Cropping Systems in Tropical and Subtropical Island Environments
24. Improving Irrigation Water Use Efficiency and Disease Management Using Low-Cost Sensor Technology
25. Making a Breakthrough in Restoring Degraded Rangelands with Novel Seed Coating Technologies
26. On-Farm Demonstration of Cloud-Based Soil Moisture Monitoring Technologies for Irrigation Scheduling in South Carolina
27. Organically Sourced Hydroponic Inputs: Knowledge Gaps for Commercial Applications
28. Protecting and Restoring Flow in the Pecos River Watershed



29. Subtropical Soil Health Demonstration: On-Farm Trials of Cover Crops in Arid Farms of South Texas—Year 1 Results
30. The State of the Science for Reducing Ammonia Emissions along Colorado's Front Range: Review of Kinetics and Management Approaches
31. Tools to Manage Conflicts and Range Health on Landscapes Shared with Livestock and Predators
32. Tree-Age: A Decision Support Tool for Estimating Grassland Bird Response to Brush Management Practices
33. Tribal Lands Carbon and Co-Benefits Tool

Conservation Economics and Policy

34. Lessons in Developing Community-Driven, State Soil Health Policy and Programs

Conservation in Organic, Specialty, Small-Scale, or Urban Agriculture

35. Influence of Crop Rotation and Cover Crop Selection on Soil Organic Carbon and Microbial Communities during the First Year of Organic Transition

Conservation Models, Tools, and Technologies

36. An Overview of the STAR (Saving Tomorrow's Agriculture Resources) Initiative's Web Application: An Innovative Platform to Promote and Track Conservation Improvements at the Field Level
37. Calculation Requirements May Contribute to Low Controlled Traffic Farming Adoption
38. Consideration of Restored Floodplain Easements in the Agricultural Conservation Planning Framework (ACPF)
39. How Much Grass Will Grow on Your Rangelands This Year? Grass-Cast Sheds Light on the Question!
40. Quantifying the Conservation Effects of CREP Practices Using STEPL In Illinois Watersheds
41. Utilizing Overland Flow Elements from the Daily Erosion Project (DEP) to Calculate Sediment Delivery in the Context of the Agricultural Conservation Planning Framework (ACPF)

Social Sciences Informing Conservation

42. Farmers' Motivation for Participating in Pennsylvania's Environmental Quality Incentives Program (EQIP)

Soil Health Resources, Indicators, Assessment, and Management

43. Comparative Effects of Cover Crops with Tillage on Soil Hydro-Physical Properties
44. Customizing Cover Crop Species Mixes for Acid Soil Conditions
45. Does Soil Organic Matter Accrual Increase Nitrogen Use Efficiency? A Field Study of Long-Term versus First-Time versus No Cover Cropping
46. Dynamic Soil Properties: Snapshot in Time for Deuel County, South Dakota
47. Economic Evaluation of Conservation Practices and Management for Rangeland Soil Health: Economic Modeling
48. Evaluating Differences in Soil Properties and Management on a Long-Term Watershed Study in Kansas
49. Land Management for Improved Yields, Environmental Resilience, and Sustainability

Water Resource Assessment and Management

50. Effects of Cover Crops on Soil Moisture Retention and Yield in Four On-Farm Sites in Kansas
51. Historic Precipitation Values Contrasted to Potential Soil Infiltration in Northeast Colorado
52. Mapping of Center Pivot Irrigation Systems in South Carolina Using Quantum Geographic Information System
53. The Use of Biochar to Reduce Excess Nutrients in Water Bodies Used for Livestock Production



SUNDAY, JULY 31

SCHEDULE and EVENTS

SCHEDULE

- 11:00 AM – 5:00 PM** Registration Desk Open
Registration Area on Lower Level 2
- 12:15 PM – 12:45 PM** New Member and First Timer Orientation
Matchless on Lower Level 1
- 1:00 PM – 3:00 PM** *Workshop 1: LandPKS—
Mattie Silks on Lower Level 1 Mobile App for Soil Identification, Wildlife Habitat Information, and Soil Health and Vegetation Monitoring
- 1:00 PM – 3:00 PM** *Workshop 2: Measure the
Penrose 1 on Lower Level 1 Impacts of Your Science-Based Approach to Farm Conservation
- 1:00 PM – 4:00 PM** *Workshop 3: Elevating
Penrose 2 on Lower Level 1 Conservation Outreach through Improved Messaging
- 1:00 PM – 4:00 PM** *Workshop 4: Leveraging
Independence on Lower Level 1 Decoloniality and Anti-Racism as Frames for Equitable Community Partnership in Sustainability Efforts
- 4:00 PM – 5:00 PM** Student and Early Career
Matchless on Lower Level 1 Professional Development Session
- 5:00 PM – 6:30 PM** Local Forum and Flavor
Colorado Ballroom F-J on Lower Level 2 Reception

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

EVENTS

New Member and First Timer Orientation

12:15 PM – 12:45 PM, Matchless on Lower Level 1

New members and conference first timers will have the opportunity to network with one another and discuss the conference with SWCS leadership who will share tips for navigating the agenda, connecting with fellow conservationists, and making the most out of time spent at the conference. 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: LandPKS—Mobile App for Soil Identification, Wildlife Habitat Information, and Soil Health and Vegetation Monitoring

1:00 PM – 3:00 PM, Mattie Silks on Lower Level 1

Instructor: Jeff Herrick, USDA ARS

Participants will learn about how to use the LandPKS app to access soil surveys and ecological site information, as well as how non-soil scientists can use the app to identify the soil for any location in the world. We will learn how to use the app to determine soil texture and color and to access information about wildlife habitat requirements for over 100 species, filtered based on location. We will then explore the monitoring tools, including BLM-AIM and NRCS-NRI vegetation, as well as all NRCS Cropland In-Field Soil Health indicators. Simple in-app instructions explain how to measure or observe each indicator. At the end of the workshop, participants will have the opportunity to provide suggestions for the development of the next generation of LandPKS apps. Participants are encouraged, but not required, to download the free app from the Apple App or Google Play Store prior to the workshop. More information is available at <https://LandPotential.org/>.



Workshop 2: Measure the Impacts of Your Science-Based Approach to Farm Conservation

1:00 PM – 3:00 PM, Penrose 1 on Lower Level 1

Instructors: *Kelly Young, Field to Market; Gina Nichols, Field to Market; Greg Pilchak, Field to Market; Laney Gordon, Field to Market*

Go beyond simply documenting the uptake of conservation agriculture practices by the growers you serve to demonstrating the impacts of those practices on natural resources. This workshop will walk participants through the Fieldprint Platform, a free, online measurement tool that measures the effects of fine-tuning growers' operations on greenhouse gas emissions, soil carbon, energy and water use, erosion, water quality, and biodiversity. Using analytics developed and agreed upon by top scientists and industry experts, the Fieldprint Platform allows conservationists to tell a compelling story, backed up by data, about the real impacts of their work.

Workshop 3: Elevating Conservation Outreach through Improved Messaging

1:00 PM – 4:00 PM, Penrose 2 on Lower Level 1

Instructors: *Jessica Espenshade, National Wildlife Federation; Adam Reimer, National Wildlife Federation*

Outreach professionals often struggle to reach beyond "the choir" of producers who are already interested in soil health and regenerative practices such as cover crops, no-till, and rotational grazing. This workshop will build professional skills and confidence to use messaging and outreach approaches that appeal to nonconservation adopting producers. By centering outreach in an understanding of producer decision making and communication principles, this workshop will enhance the existing technical capacities of professionals. This workshop will include a mix of content delivered by outreach professionals from the National Wildlife Federation (NWF), breakout discussions among participants, and a planning session to apply concepts to outreach programming. The content shared by NWF staff is based on current social and behavioral science research on producer decision making, including diffusion of agricultural

innovations through farming populations, communication principles, and community engagement. This workshop will allow participants to share their experiences with outreach approaches that have been successful at reaching nonadopting producers, and co-learn, with fellow participants, new strategies and messages to engage traditionally hard-to-reach audiences.

Workshop 4: Leveraging Decoloniality and Anti-Racism as Frames for Equitable Community Partnership in Sustainability Efforts

1:00 PM – 4:00 PM, Independence on Lower Level 1

Instructor: *Brandon Bell, Syngenta North America*

Understanding the interplay between social justice and environmental sustainability will be key in forging solutions to address 21st-century climate and sustainability concerns. The historical underpinning of colonization and racism further complicate efforts for true synergy across groups with differing pasts but shared future needs. This session explores the ideological shifts and practical actions professionals and organizations can take in order to craft mutually beneficial relationships that center on equity as a key lever of a sustainable future for all. Participants will leave with actionable steps to assess their readiness to engage in culturally responsive and restorative sustainability efforts.

Student and Early Career Professional Development Session


4:00 PM – 5:00 PM, Matchless on Lower Level 1

In this session, students will work to broaden their network and learn more about internship, job, and graduate school opportunities that are available. While exploring their options, students will be introduced to mentors to help guide them on their career path and learn how to grow within their membership at SWCS.

Local Forum and Flavor Reception

5:00 PM – 6:30 PM, Colorado Ballroom F-J on Lower Level 2

This year's conference reception will include a selection of themed appetizers highlighting the local flavor of Colorado, along with a cash bar. Spend



time networking with colleagues from 5:00 pm to 5:30 pm, followed by a conference welcome from SWCS Southwest Regional Director Steve Kadas, local welcome from Colorado USDA NRCS State Conservationist Clint Events, and a presentation entitled, "Local Conservation, Global Impacts."

Presenter: *Gene Kelly, Colorado State University*



Gene Kelly has spent the bulk of his career at Colorado State University (CSU). Currently he serves as a professor of pedology, deputy director of the Colorado Agricultural Experiment Station, and associate director for research in the School of Global Environmental Sustainability. During his

presentation, he will share some of the most recent, impactful research occurring in the state.

Gene has also held leadership roles with many outside organizations, providing him the opportunity to engage with and become a recognized leader among members of the national scientific community. He has conducted research and lectures nationally and internationally on various aspects of soils as related to global change issues. He frequently provides expert testimony on issues related to soils and the environment. From this body of work, he will share his views of the future of studying and communicating the value of soil and the need to protect it.

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

Gene Kelly is a professor of pedology, and deputy director of the Colorado Agricultural Experiment Station at Colorado State University (CSU). He received his BS and MS degrees from Colorado State University and his PhD from the University of California-Berkeley. Kelly conducts research and lectures nationally and internationally on various aspects of soils as related to global change issues. His scientific specialization is in pedology and geochemistry with primary interests in the biological

weathering of soil and studies of soil degradation and global biogeochemical cycles. His current research is centered on global soil degradation and the fundamental role of grasslands in global biogeochemical cycles. He is a member of the US National Committee for Soil Science with the National Academy of Sciences. He serves as an advisor to the USDA with the National Cooperative Soil Survey, USDA's National Institute of Food and Agriculture, The National Science Foundation, and several major research programs. He is a Fellow of the Soil Science Society of America and is the recipient of the 2016 Soil Science Society of America Research Award. A native of New York, a marathoner and triathlete, he lives in Boulder, Colorado.

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.



Ecological restoration of South Creek in Springfield, Missouri. This one-mile stretch of South Creek in Springfield, Missouri, was ecologically restored using partial funding from the 319 program.



SUNDAY, JULY 31, 2022			
11:00 AM - 5:00 PM	Registration Desk Open		Lower Level 2 Registration Area
12:15 PM - 12:45 PM	New Member and First Timer Orientation		Lower Level 1 Matchless
WORKSHOPS			
1:00 PM - 3:00 PM	Workshop 1: LandPKS—Mobile App for Soil Identification, Wildlife Habitat Information, and Soil Health and Vegetation Monitoring - <i>Jeff Herrick, USDA ARS</i> (ticket required, additional fees apply)		Lower Level 1 Mattie Silks
1:00 PM - 3:00 PM	Workshop 2: Measure the Impacts of Your Science-Based Approach to Farm Conservation - <i>Kelly Young, Field to Market; Gina Nichols, Field to Market; Greg Pilchak, Field to Market; Laney Gordon, Field to Market</i> (ticket required, additional fees apply)		Lower Level 1 Penrose 1
1:00 PM - 4:00 PM	Workshop 3: Elevating Conservation Outreach through Improved Messaging - <i>Jessica Espenshade, National Wildlife Federation; Adam Reimer, National Wildlife Federation</i> (ticket required, additional fees apply)		Lower Level 1 Penrose 2
1:00 PM - 4:00 PM	Workshop 4: Leveraging Decoloniality and Anti-Racism as Frames for Equitable Community Partnership in Sustainability Efforts - <i>Brandon Bell, Syngenta North America</i> (ticket required, additional fees apply)		Lower Level 1 Independence
4:00 PM - 5:00 PM	Student and Early Career Professional Development Session		Lower Level 1 Matchless
5:00 PM - 6:30 PM	Local Forum and Flavor Reception Opening Remarks - <i>Steve Kadas, Soil and Water Conservation Society Southwest Regional Director; Colorado Welcome - Clint Evans, Colorado USDA NRCS State Conservationist; Local Conservation, Global Impacts - Gene Kelly, Colorado State University</i>		Lower Level 2 Colorado Ballroom F-J

MONDAY, AUGUST 1

SCHEDULE and EVENTS

SCHEDULE

- 6:30 AM – 5:00 PM** Registration Desk Open
Registration Area on Lower Level 2
- 7:00 AM – 8:30 AM** State of the Society Address to the House of Delegates and Regional Sessions (for Current and Prospective Chapter Leaders and Members)
Colorado Ballroom F-J on Lower Level 2
- 8:30 AM – 10:00 AM** Conference Kickoff, Keynote Sponsor, and Pritchard Keynote Lecture
Colorado Ballroom F-J on Lower Level 2
- 10:00 AM – 10:30 AM** Morning Break: Exhibit Hall and Poster Presentations Open
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2
- 10:30 AM – 12:00 PM** Concurrent Sessions
See pages 27-29
- 11:00 AM – 1:30 PM** *Association of Retired Conservation Service Employees (ARCSE) Annual Meeting (Partner Event) (Offsite)
Ritz-Carlton, The Hall of Fame Room, 1881 Curtis Street
- 12:00 PM – 1:30 PM** Lunch on Your Own
- 1:30 PM – 3:00 PM** Concurrent Sessions
See pages 27-29
- 3:00 PM – 3:30 PM** Afternoon Break: Exhibit Hall and Poster Presentations Open
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2
- 3:30 PM – 5:00 PM** Concurrent Sessions
See pages 27-29
- 5:00 PM – 7:00 PM** Exhibitor and Poster Reception
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2

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

EVENTS

State of the Society Address to the House of Delegates and Regional Sessions (for Current and Prospective Chapter Leaders and Members)

7:00 AM – 8:30 AM, Colorado Ballroom F-J on Lower Level 2

Prior to the Conference Kickoff, SWCS leadership will deliver the State of the Society Address to the House of Delegates. SWCS Regional Directors will lead chapter delegates and members in a discussion on local events and issues. Breakfast bars will be provided for members in attendance. Don't miss this opportunity to guide the future direction of your professional society.

View the State of the Society and Regional Session Agenda at <https://www.swcs.org/soshodrr>.

Conference Kickoff, Keynote Sponsor, and Pritchard Keynote Lecture

8:30 AM – 10:00 AM, Colorado Ballroom F-J on Lower Level 2

The Conference Kickoff will be opened by CEO Clare Lindahl. This year's keynote sponsor, Caydee Savinelli, Syngenta Stewardship Team and Pollinator Lead, will address the audience, followed by the Pritchard Keynote Lecture, "A Case for Conservation: Civilization, Communication and Climate."

Presenter: David Montgomery, Dig2Grow

Follow the journey of our world's soil through the book series of esteemed author David Montgomery.

As an author of books written for a popular audience and a featured contributor to public conversations about science through articles, documentary films, news shows, and a wide

variety of television and radio programs, from NOVA to Fox and Friends, Montgomery will share the journey of soils through the lens of his own work to communicate their value and need for protection.

David Montgomery's interests in soil began more than a decade ago with the publication of his book *Dirt: The Erosion of Civilizations*, which explored the human history of mining the soil to feed a population, with the almost-inevitable consequences. Tucked alongside the many stories of societies' booms and busts, Montgomery inserts hopeful notes; examples that suggest there are ways to shepherd soil resources so as to avoid catastrophe. He builds on that hopefulness in *Growing a Revolution: Bringing Our Soil Back to Life* and in *The Hidden Half of Nature: The Microbial Roots of Life and Health*, coauthored with wife Anne Biklé. The take-home message: Earth and its soil are complex and alive. Soil is a resource—a scarce one—but it is alive as well. The series ends where our work as conservation professionals begins, with David Montgomery's newest book, published in June of this year, *What Your Food Ate: How to Heal Our Land and Reclaim Our Health*, which marshals evidence from recent and forgotten science to illustrate how the health of the soil ripples through to that of crops, livestock, and ultimately us. Described as a "must-read for farmers, eaters, chefs, doctors, and anyone concerned with reversing the modern epidemic of chronic diseases and mitigating climate change," this

newest edition to the soil series shows us why what's good for the land is good for us too.



David R. Montgomery

is a MacArthur Fellow and professor of geomorphology at the University of Washington. He studies landscape evolution and the effects of geological processes on ecological systems and human societies. An author of award-winning popular-

science books, he has been featured in documentary films, network and cable news, and on a wide variety of TV and radio programs. His books have been translated into 10 languages. He lives in Seattle with his wife, and coauthor, Anne Biklé. Their new book, *What Your Food Ate: How to Heal Our Land and Reclaim Our Health*, was published in the spring of 2022. Connect with them at www.dig2grow.com or follow Montgomery on Twitter (@dig2grow).

The presentation will be followed by Q&A and a book signing. David Montgomery's books will be available for purchase as well.

JOIN US!

When you join SWCS, you join a community of conservationists who care about the future of natural resources.

www.swcs.org/join

As an SWCS member, you will

- **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





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

11:00 AM – 1:30 PM, Ritz-Carlton, The Hall of Fame Room, 1881 Curtis Street

The Association of Retired Conservation Service Employees (ARCSE) will host their annual meeting at Elway's in the Ritz-Carlton, Hall of Fame Room, 1881 Curtis Street, Denver, Colorado. The event will include ARCSE program updates, awards, and other special presentations. NRCS leadership, Chief Terry Cosby, and Colorado State Conservationist Clint Evans, have been invited to speak. Our primary goal is to network past, present, and next generation conservationists looking forward to the decades of work ahead. Registration for the event was required in advance. More information can be found at www.arcse.org.

View the [ARCSE Annual Meeting Agenda](http://www.swcs.org/22ACpartnerevents) at www.swcs.org/22ACpartnerevents.

Exhibitor and Poster Reception

5:00 PM – 7:00 PM, Colorado Ballroom A–E and Denver Ballroom 1-4 on Lower Level 2

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. Additional tickets may be purchased online in advance for guests or at the registration table if available.



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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MONDAY, AUGUST 1, 2022				
6:30 AM - 5:00 PM	Registration Desk Open			Lower Level 2 Registration Area
7:00 AM - 8:30 AM	State of the Society Address to the House of Delegates and Regional Sessions (for Current and Prospective Chapter Leaders and Members)			Lower Level 2 Colorado Ballroom F-J
8:30 AM - 10:00 AM	SWCS Conference Opening - <i>Clare Lindahl, Soil and Water Conservation Society CEO and Dale Threatt Taylor, Soil and Water Conservation Society Chair</i> ; Keynote Sponsor - <i>Caydee Savinelli, Syngenta</i> ; Pritchard Keynote Lecture: A Case for Conservation: Civilization, Communication and Climate - <i>David Montgomery, Dig2Grow</i>			Lower Level 2 Colorado Ballroom F-J
10:00 AM - 10:30 AM	Morning Break: Exhibit Hall and Poster Presentations Open			Lower Level 2 Colorado Ballroom A-E and Denver Ballroom 1-4
10:30 AM - 12:00 PM		SYMPOSIA SESSIONS		
Lower Level 2 Colorado Ballroom F-J Conservation Innovation Grants Showcase	Conservation Innovation Grants Program Overview and Stakeholder Updates: Innovations in Water Conservation - <i>Caroline Sherony and Havalah Schumacher, USDA NRCS</i>			
Lower Level 2 Denver Ballroom 5-6 Chapter and Professional Development	Effective Networking and Leadership - <i>Alyson Keaton, USDA NRCS; Jeanne Hamilton, USDA NRCS; Becky Ross, USDA NRCS; Jill Reinhart, USDA NRCS; Angela Biggs, USDA NRCS; Karen Woodrich, USDA NRCS</i>	10:30 AM - 11:15 AM	11:15 AM - 12:00 PM	Hiring Diversity: Equitable Hiring Practices - <i>Ebony Webber, M/NRIS</i>
Lower Level 1 Mattie Silks At the Intersection of Agriculture and Conservation	Improving Water Stewardship and Resilience: California Almonds - <i>Gabriele Ludwig, Almond Board of California</i>			
Lower Level 1 Penrose 1 On the Frontier of Conservation in the West	Forest Management and Biochar for Continued Ecosystems Services - <i>Carlos Rodriguez-Franco, USDA Forest Service</i>			
10:30 AM - 12:00 PM		ORAL PRESENTATIONS		
		10:30 AM	10:53 AM	11:16 AM
Lower Level 1 Penrose 2 Climate-Smart Agriculture	Climate-Smart Practices for Increasing Resilience of Rural and Urban Land Uses at a Watershed Scale - <i>Ernad Maady, University of Massachusetts</i>	Regenerative Farming and Ranching: A Qualitative Analysis - <i>Lara Bryant, Natural Resources Defense Council</i>	The Confusion, Meaning, and Implications of Good Farming Practices and Crop Insurance Barriers to Conservation in an Era of Climate Disruption - <i>Jeff Schatzowski, National Center for Appropriate Technology</i>	
Lower Level 1 Independence Social Sciences Informing Conservation	Learning from Conservation Practitioners: A Mixed Methods Analysis of Conservation Delivery Systems - <i>Chris Morris, Iowa State University</i>	Walter Lowdermilk and the SCS in WWII China - <i>Shelby Callaway, USDA NRCS</i>	Wetlands Protection and Planning: Potentials for Bridging Land and Water Planning through Public Engagement and Ecosystem Services - <i>Sarah Church, Montana State University</i>	What Explains Different Findings about the Determinants of Agricultural Conservation Adoption?: A Meta-Analysis - <i>Benjamin Gramig, USDA Economic Research Service</i>
Lower Level 1 Gold Coin Soil Health Resources, Indicators, Assessment, and Management	Adoption of STAR in Colorado: A Model for Western States - <i>Ryan M. Taylor, Colorado Department of Agriculture</i>	Centering Soil Health: Innovative Drivers to Effective Transition - <i>William H. Schleizer, Delta Institute</i>	Effects of Management on Soil Health in Ohio - <i>William Osterholz, USDA ARS</i>	
Lower Level 1 Matchless Water Resource Assessment and Management	Investing in Success: Implementing the Gulf Hypoxia Action Plan - <i>Katie Flahive, US Environmental Protection Agency</i>	Selecting the Best Practices for Managing Legacy Phosphorus Fields Identified through a Public Private Partnership - <i>Michael Brooker, Ohio State University</i>	The Impact of Climate and Geo-Spatial Variability on Nature-Based Solution Co-Benefit Patterns and Evaluation Methods: A Systematic Review - <i>Adrienne G. Donaghue, US Environmental Protection Agency</i>	Quantifying the Environmental Effects of Implementing Managed Agricultural Aquifer Recharge in Agricultural Production Systems - <i>Helen Dahlke, University of California, Davis</i>

11:00 AM – 1:30 PM Partner Event	Association of Retired Conservation Service Employees (ARCSE) Annual Meeting (ticket required, additional fees apply)		Offsite
12:00 PM - 1:30 PM	Lunch on Your Own		
1:30 PM - 3:00 PM	SYMPOSIUM SESSIONS		
Lower Level 2 Colorado Ballroom F-J Conservation Innovation Grants Showcase	Building Resilient Ecosystems - <i>Caroline Sherony and Haval Schumacher, USDA NRCS</i>		
Lower Level 2 Denver Ballroom 5-6 Chapter and Professional Development	1:30 PM - 2:15 PM The Power of Partnerships: Implementing Conservation through Grants and Projects - <i>Joe Otto, Soil and Water Conservation Society</i>	2:15 PM - 3:00 PM Reenergizing Events: Creating Meaningful Community Engagement - <i>Renee Bouldin, Soil and Water Conservation Society; Krista Kirkham, SWCS Illinois Chapter; Arlene Brandt-Jenson, SWCS South Dakota Chapter; Dee C. Pederson, SWCS Georgia Chapter; Cory Hoar, SWCS Virginia Chapter</i>	
Lower Level 1 Mattie Silks Adaptive Management of Conservation Efforts	Scaling Up Conservation Practices in Dairy: The Nature Conservancy and Partners - <i>Carrie Vollmer-Sanders, The Nature Conservancy</i>		
1:30 PM - 3:00 PM	ORAL PRESENTATIONS		
	1:30 PM	1:53 PM	2:16 PM
Lower Level 1 Penrose 1 At the Intersection of Agriculture and Conservation	Building Soil Health within the Dairy Supply Chain: How Do We Include Partners to Integrate Change in Soil Health at the Production Level? - <i>Kinzle Reiss and Julie Platz, American Farmland Trust</i>	Sanborn Field Long Term Findings: Soil Erosion—Soil Water Availability: Redux - <i>Clark Gantzer, University of Missouri</i>	Changes in Accrued and Sequestered Carbon in Agroecosystems Implementing Single Standard Conservation Practices vs. the Integration of Multiple Conservation Practices - <i>Ann Marie Fortuna, USDA ARS</i>
Lower Level 1 Penrose 2 Conservation Models, Tools, and Technologies	Assessing Land Health with State and Transition Models - <i>Shane A. Green, USDA NRCS</i>	Examining the Potential of Conservation Practices to Maximize Subfield Profitability and Environmental Benefits - <i>Haleigh Summers, Iowa State University</i>	Mobile Conservation Applications for Onsite Problem Solving - <i>Donald A. Sternitzke, USDA NRCS</i>
Lower Level 1 Independence Outreach, Education, and Community Engagement	Assessing the Impact of an Outreach Training Program on Agricultural Conservation Behavior - <i>Adam P. Reimer, National Wildlife Federation</i>	Promoting Sustainability through Environmental Stewardship - <i>Donna S. Gentry, Louisiana State University AgCenter</i>	The Role of Farmer Networks in Supporting Adaptive Capacity: Opening the Door for Innovation and Transformation - <i>Alissa C. White, University of Vermont</i>
Lower Level 1 Gold Coin Water Resource Assessment and Management		An Improved Design Criterion for Optimizing the Performance of Saturated Buffers - <i>Ehsan Ghane, Michigan State University</i>	A Decade of Edge-of Field Monitoring: Results from the Arkansas Discovery Farm Program - <i>Mike Daniels, University of Arkansas System Division of Agriculture Cooperative Extension Service</i>
			Quantifying Sulfate Loss in Edge-of-Field Runoff from Selected Arkansas Discovery Farms Research Sites - <i>James M. Burke, University of Arkansas</i>

3:00 PM - 3:30 PM	Afternoon Break: Exhibit Hall and Poster Presentations Open			Lower Level 2 Colorado Ballroom A-E and Denver Ballroom 1-4
3:30 PM - 5:00 PM	SYMPOSIA SESSIONS			
Lower Level 2 Colorado Ballroom F-J Conservation Innovation Grants Showcase	Scaling Soil Health - <i>Caroline Sherony and Havalah Schumacher, USDA NRCS</i>			
Lower Level 2 Denver Ballroom 5-6 Chapter and Professional Development	3:30 PM - 4:15 PM Crossroads of Indian Country: An Overview of the Native Community in Denver - <i>Rick Waters, Denver Indian Center</i>	4:15 PM - 5:00 PM Stories from the Hill with SWCS CEO - <i>Clare Lindahl, Soil and Water Conservation Society</i>		
Mattie Silks At the Intersection of Agriculture and Conservation	Taking the Watershed Approach: State of Science and Analytical Data Tools at our Fingertips to Help Us Succeed - <i>Katie Flahive, US Environmental Protection Agency</i>			
Lower Level 1 Penrose 1 Outreach, Education, and Community Engagement	Seven Economic Case Studies from California, Oklahoma, Pennsylvania, and New York Featuring "Soil Health Successful" Almond, Row Crop, and Dairy Producers - <i>Ellen Yeatman, American Farmland Trust</i>			
3:30 PM - 5:00 PM	ORAL PRESENTATIONS			
Lower Level 1 Penrose 2 At the Intersection of Agriculture and Conservation	3:30 PM Benefits and Consequences of No-Tillage and Cover Crop Use in Semiarid Cotton Production - <i>Joseph Burke, Texas A&M Agrilife Research</i>	3:53 PM Evidence that Long-Term Cover Cropping- Induced Increases in Soil Organic Matter Enhanced Grain Corn Yield via Nitrogen Availability - <i>Laura L. Van Eerd, University of Guelph</i>	4:16 PM Impact of Crop Rotation, No-Till, and Cover Crops on Soil Physical and Hydraulic Properties in Southeastern South Dakota - Ajay K. Saha, South Dakota State University	4:39 PM Meeting the Cover Crop Seed Demand - <i>Jennifer Moore, USDA ARS</i>
Lower Level 1 Independence Conservation Models, Tools, and Technologies	Conservation Models as a Service - <i>Jack R. Carlson, Colorado State University</i>	Modeling River Water Temperatures Produced by Varying Flows in the Yakima River - <i>Brian J. Ebel, USDA NRCS</i>	Investigation of Spatial Pollutant Interactions within a Dual-Chamber Woodchip Bioreactor - <i>Natasha L. Hoover, Iowa State University</i>	Tracking Conservation Delivery, Implementation, and Watershed Management through Innovative Technological Solutions in Minnesota - <i>Matt Drewitz, Minnesota Board of Water and Soil Resources</i>
Lower Level 1 Gold Coin On the Frontier of Conservation in the West	Agricultural Water Metering and Water Delivery System Efficiency - <i>Steven Wallander, USDA Economic Research Service</i>	Does the El Niño Southern Oscillation Affect Modelled Cotton Yield Response to Irrigation for Thermally Limited Growing Seasons of Western Kansas? - <i>R. Louis Baumhardt, USDA ARS</i>	Helping Build Drought Resiliency through Federal Investment Coordination - <i>Daniel Dostie, USDA NRCS</i>	The Influence of Climate Change on Soil Salinity and Sodicity in a Mediterranean Agro- Ecosystem - <i>Michael Z. Litaor, MIGAL & THC</i>
Lower Level 1 Matchless Soil Health Resources, Indicators, Assessment, and Management		Impacts of Long-Term Shrub Willow Production for Bioenergy on Soil Carbon in a Midwest Agricultural Field - <i>Colleen Zumpl, Argonne National Laboratory</i>	Still Gaining: Long-Term Benefits of Conservation Bioenergy Practices - <i>Catherine Stewart, USDA ARS</i>	
5:00 PM - 7:00 PM	Exhibitor and Poster Reception			Lower Level 2 Colorado Ballroom A-E and Denver Ballroom 1-4



MONDAY, AUGUST 1

SYMPOSIA SESSIONS

Conservation Innovation Grants (CIG) Showcase

10:30 AM – 5:00 PM, Colorado Ballroom F-J on Lower Level 2

The USDA Natural Resources Conservation Service (NRCS), in conjunction with SWCS, will host the CIG Showcase at the SWCS Annual Conference. Since 2004, CIG has supported the development of innovative natural resource conservation approaches and technologies on working lands.

This year's showcase includes an overview of the CIG program and three themed panels. The first panel highlights innovations in water conservation. The second panel explores building resilient ecosystems. The final panel will address scaling soil health related to cover crops.

This showcase runs from 10:30 am to 5:00 pm on Monday, August 1. Following the showcase, CIG project posters will be included in the poster presentation session held in the poster display area of the exhibit hall from 5:00 pm to 7:00 pm.

Conservation Innovation Grants Program Overview and Stakeholder Updates; Innovations in Water Conservation

10:30 AM – 12:00 PM

Introduction: Conservation Innovation Grants Program Overview and Stakeholder Updates – *Caroline Sherony and Havalva Schumacher, USDA NRCS*

Presentation 1: Innovative Technologies for Water Conservation in Flood Irrigation Systems – *Saleh Taghvaeian, Oklahoma State University*

Presentation 2: On-Farm Demonstration and Evaluation of Cloud-Based Soil Moisture Monitoring Technologies for Irrigation Scheduling to Enhance Farm Profitability and Environmental Quality – *Jose Payero, Clemson University*

Presentation 3: Accelerating Adoption of Water Conservation Technologies and Management Practices through Innovative Engagement Programming – *Daran Rudnick, University of Nebraska*

Presentation 4: Promoting BMPs of Nursery Production System – *Dharma Pitchay, Tennessee State University*

Building Resilient Ecosystems

1:30 PM – 3:00 PM

Presentation 1: Ecological and Economic Impacts of Resource Conservation on Horse Farms – *Krista Lea, University of Kentucky*

Presentation 2: Afognak Island Innovative Silvopastoral and Subsistence Management Project – *Peter Olsen, Koniag, Inc. Regional Native Corporation*

Presentation 3: Increasing Landscape-Scale Adoption of Agroforestry Systems in Central Appalachia through Market-Based Incentives – *Katie Commender, Appalachian Sustainable Development*

Presentation 4: Piloting the Family Forest Carbon Program in the Central Appalachian Region – *Christine Cadigan and Elizabeth Vranas, American Forest Foundation*

Presentation 5: New Opportunities for Establishing NRCS Pollinator Habitat in the Pacific Northwest – *Andony Melathopoulos, Oregon State University*

Presentation 6: Forage Forecasting/Nutritional Analytics: Decision Support for Rangeland/Grazingland Ecosystems – *Bill Fox, Texas A&M University*

Scaling Soil Health

3:30 PM – 5:00 PM

Presentation 1: Deploying the Living Mulch Crop Production System to Build Soil Health – *Matt Levi and Chandler Gruener, University of Georgia*

Presentation 2: Finding the Commonalities among Successful Soil Health Innovators and Demonstrating Practices for Increased Adoption – *Johns Lofton, Oklahoma State University*

Presentation 3: FARMS: Farmers Advancing Regenerative Management Systems – *Joni Mitchek, Colorado Conservation Tillage Association*

Presentation 4: Advancing Precision Nutrient and Soil Health Management with Retailer Cooperatives – *Joe Otto, Soil and Water Conservation Society*



Professional and Chapter Development Sessions

10:30 AM – 5:00 PM, Denver Ballroom 5-6 on Lower Level 2

The professional and chapter development sessions are for the growth of professionals and chapters. These sessions will help professionals become more effective across the diverse set of fields that serve conservation. You will learn from the experiences, challenges, and successes of other conservation professionals. Sessions on chapter development are relevant not only to SWCS chapters, but also to any small organization seeking to have a big impact.

Effective Networking and Leadership

10:30 AM – 11:15 AM

Moderators: *Alyson Keaton, USDA NRCS; Jeanne Hamilton, USDA NRCS*

Presenters: *Becky Ross, USDA NRCS; Jill Reinhart, USDA NRCS; Angela Biggs, USDA NRCS; Karen Woodrich, USDA NRCS*

Are you looking for ways to effectively broaden your networks to further your career? This panel of women leaders in NRCS may provide some great advice. They will share stories of how they achieved their goals, how networking has helped them reach their milestones, and answer questions from the audience.

Hiring Diversity: Equitable Hiring Practices

11:15 AM – 12:00 PM

Presenter: *Ebony Webber, MANRRS*

Research has shown that organizations with a diverse workforce report greater profits, innovation, and the ability to attract and retain top talent. Join this session led by Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS), the leading organization for underrepresented minorities in food and agriculture, to learn successful strategies for actually hiring for diversity and diversity recruiting mistakes to avoid.

The Power of Partnerships: Implementing Conservation through Grants and Projects

1:30 PM – 2:15 PM

Presenter: *Joe Otto, Soil and Water Conservation Society*

In this professional development session, SWCS Director of Special Projects and Partnerships Joe Otto will present on the Society's leveraging of grant opportunities to advance the organization's mission and build capacity through forming partnerships around externally funded projects. He will review SWCS's current and recently completed grant projects, the processes of opportunity discernment, proposal preparation, and project management. The session will conclude with Q&A and open discussion about building capacity for organizations to develop grants and special project programming.

Reenergizing Events: Creating Meaningful Community Engagement

2:15 PM – 3:00 PM

Presenters: *Renee Bouldin, Soil and Water Conservation Society; Krista Kirkham, SWCS Illinois Chapter; Arlene Brandt-Jenson, SWCS South Dakota Chapter; Dee C. Pederson, SWCS Georgia Chapter; Cory Hoar, SWCS Virginia Chapter*

After years in a virtual world, it's time to refresh our outlook on what makes for a successful event. In this session, our SWCS chapter leaders will provide rapid overviews of their most unique events from the past year. These events not only promoted soil and water conservation, but did so in a more relaxed and engaging setting. We're excited to find innovative ways to hold meetings and share information, while allowing space for valuable networking and community building.

Crossroads of Indian Country: An Overview of the Native Community in Denver

3:30 PM – 4:15 PM

Presenter: *Rick Waters, Denver Indian Center*

This session provides a conversation on Native history in Colorado and the United States, and how that history impacts relationship building. Further, learn how reservations, treaties, boarding schools, and federal relocation programs impacted and continue to impact the Native American community. Join Rick

Waters, the executive director of the Denver Indian Center, as he discusses the organization and how a space was created to support the Native community while preserving and celebrating Native culture. The history of land use is tied to American Indian history. Breaking down the “invisibility” of American Indians will help create a more equitable future.

Stories from the Hill with SWCS CEO

4:15 PM – 5:00 PM

Presenter: *Clare Lindahl, Soil and Water Conservation Society*

SWCS CEO Clare Lindahl worked on location in Washington, DC, for four months this spring. During her visit, she worked closely with the SWCS National Capitol Chapter and met with 69 different organizations and agencies to take the voices of conservation professional members to the desks of leadership and create collaborations to advance issues members care about. Attend this session to learn about her activities during this time and how SWCS priorities and member needs translate into advocacy and policy. Enjoy some fun stories as well!



Join us!

Learn from experts in the conservation field as they share advice and knowledge on topics such as professional branding, getting into grad school, managing money, and finding a job. These virtual events are for students and early career professionals in natural resources conservation, environmental science, biology, agriculture, soil science, hydrology, and others working toward a more sustainable world.

Thursdays, 6pm EST

- September 22, 2022
- October 20, 2022
- January 26, 2023
- February 23, 2023

Hosted by:



Improving Water Stewardship and Resilience: California Almonds


10:30 AM – 12:00 PM, Mattie Silks on Lower Level 1

Moderator: *Gabriele Ludwig, Almond Board of California*

Presenters: *Tom Devol, Almond Board of California; Michael Roots, Almond Board of California; Ellen Yeatman, American Farmland Trust*

The tremendous diversity of healthy fruits, vegetables, and nuts that California supplies is dependent on the ability to irrigate. Between new regulations and climate change, the quantity of water available for irrigation is changing. This session will showcase how almond growers are taking a multipronged approach to improve irrigation efficiencies and drought resilience. The Almond Board of California (ABC), a federal marketing order, has developed and implemented a unique, comprehensive almond irrigation efficiency program, including research (e.g., irrigation system advancements, soil health impacts, ground water recharge, etc.) and focused outreach centered on the “Irrigation Improvement Continuum,” which promotes irrigation efficiency practices for both smaller and larger acreage growers. ABC’s California Almond Stewardship Platform tracks conservation practice adoption overtime and estimates additional associated benefits, e.g., appropriate nitrogen applications and irrigation frequency and amounts, using a Nitrogen Calculator and Irrigation Calculator. ABC’s irrigation research and outreach program partners with resource conservation districts, Extension, nongovernmental organizations, farm supply companies, etc. to reach growers in different ways, including development of a predictive irrigation efficiency economic assessment tool in partnership with American Farmland Trust (AFT). The ABC-AFT tool uses partial budget analysis to estimate the potential future costs and benefits of implementing practices identified in the Irrigation Improvement Continuum and run “what if” conservation planning scenarios. In this symposium, we will give a sneak-peek of the predictive irrigation efficiency economic assessment tool that is in development.

We (ABC) will share the multipronged approach tried and lessons learned, along with assessments from the California Almond Stewardship Platform on practice changes over time. AFT will present on the economic



assessment approach for the irrigation efficiency efforts building on their experience with the SHEC model used for soil health ROI assessments.

Forest Management and Biochar for Continued Ecosystems Services

10:30 AM – 12:00 PM, Penrose 1 on Lower Level 1

Moderator: *Carlos Rodriguez Franco, USDA Forest Service*

New approaches to managing the uncertainty associated with climate change implies the use of adaptive management and robust decision-support strategies, with the integration of innovative forest management practices. Advances on forest management alternatives under a changing climate to enhance ecosystem health and sustainability should be designed to ensure the flow of continued ecosystem services, such as water, wildlife, biodiversity, recreation, and forest and grassland products, and help to reverse the decline in ecosystem function from associated ecological disturbances, such as drought, wildfire, insects, and invasive species.

Forest managers, environmental groups, decision makers, technical advisors, and agricultural research and development planning efforts, and the development of resilient agricultural production

systems, will help to sustain agricultural production during the 21st century. One of the main elements of sustainable forests and continued ecosystem services is soil productivity. Biochar could help to improve soil productivity, increase soil organic matter content, improve soil characteristics and contribute to water retention, and increase resiliency to the impacts of climate change.

The 90-minute session will frame the current impacts of climate change in forest ecosystems, and it will discuss the technologies available for woody biochar production, how woody biochar could support the redistribution of organic matter in forest ecosystems and also for other uses such as agriculture, and how it contributes to better soil health, closing with examples of biochar applications in different forest conditions.

Presentation 1: Climate Change and Extreme Events Affecting Forest Ecosystems – *Carlos Rodriguez Franco, USDA Forest Service*

Presentation 2: Technologies to Produce Biochar at Different Scales – *Tom Miles, United States Biochar Initiative*

Presentation 3: Management Strategies and Plans in Redistributing Organic Matter in Forest Watersheds – *Jim Archuleta, USDA Forest Service*



40+ YEARS IN THE BUSINESS
3 LOCATIONS
2 STATES

HICKENBOTTOM
BRIGHT ORANGE INLET
FAIRFIELD, IA 52556, USA

1 COLOR ABOVE THE REST

The image shows a large stack of bright orange plastic pipe sections on the left and a black pipe section on the right. In the center, there is a circular logo for Hickenbottom. The logo features the text 'HICKENBOTTOM' at the top, 'BRIGHT ORANGE INLET' in the middle, and 'FAIRFIELD, IA 52556, USA' at the bottom. The background of the logo is a green field with a blue sky.



Presentation 4: Improving Soil Health with Biochar –
Deborah Dumroese, USDA Forest Service

Scaling Up Conservation Practices in Dairy: The Nature Conservancy and Partners

1:30 PM – 3:00 PM, Mattie Silks on Lower Level 1

Moderator: *Carrie Vollmer-Sanders, The Nature Conservancy*

Presenters: *Michelle Rossman, Dairy Management Inc.; Lara Moody, Institute for Feed Education and Research; Liz Hunt, Syngenta*

An interactive session with the partners of the US Dairy Feed in Focus (FiF) Program. Participants will learn about this new program to pilot and scale the adoption of best management practices in feed/ forage production and efficiency, for feed grown on dairy farms. These practices are expected to result in significant benefits for climate change mitigation, improved soil health, and increased water quality on dairy farms of all sizes. The audience will hear from panelists/partners working together in Wisconsin, a leading dairy state. In addition, panelists will discuss a new project emerging to trial dietary interventions to mitigate enteric methane emissions in dairy cattle. The USDA recently announced a \$537,440 award for this project through its Conservation Innovation Grants On-Farm Conservation Innovation Trial program. With project partner resource contributions, the project will total more than \$800,000. Working with up to 10 dairy farms in Michigan and Wisconsin, this project will combine on-farm trials and demonstrations of emerging technologies with strategic engagement of critical stakeholders including farmers, farm advisors, industry, carbon market players, and regulators for scaling the adoption of feed management strategies. The project will provide direct financial support to participating farmers to cover their costs of participation, in alignment with the Feed Management 592 and Feed Management Plan 108 Practice Standards schedules.

Taking the Watershed Approach: State of Science and Analytical Data Tools at Our Fingertips to Help Us Succeed

3:30 PM – 5:00 PM, Mattie Silks on Lower Level 1

Moderator: *Katie Flahive, US Environmental Protection Agency*

Presenters: *Cyd Curtis, US Environmental Protection Agency; Adrienne Donaghue, US Environmental Protection Agency; Ellie Flaherty, US Environmental Protection Agency; Brian Fontenot, US Environmental Protection Agency*


The US Environmental Protection Agency's (EPA) Nonpoint Source Pollution Program (or Section 319 Program) remediates nonpoint sources of pollution using a watershed approach. The practical application of the watershed approach results in watershed-based plans (WBPs) that guide restoration through a series of steps to identify water quality problems and prescribe effective remediation measures by coordinating local, state, and federal stakeholder resources. State Nonpoint Source programs have achieved many successes using WBPs.

To assess how well this approach has worked and what may be done to improve upon it, EPA conducted a literature review of over 100 WBP-focused technical and training articles. This review centered on primary scientific literature as well as local, state, and federal reports that document WBP projects, training, and technical advancements. The results from this work that will be presented provide a "State of the Science" overview of the current technical and training knowledge and answer these questions:

- What are the key technical takeaways?
- What findings will improve current WBP practice in the NPS program?
- Do WBPs continue to be necessary for achieving NPS water quality improvement and restoration?
- How to enhance current training?
- What else should EPA consider?

When developing a WBP, there are two categories of planning to consider: technical elements and community engagement. Panelists will lead participants through exploration of local water quality data using How's My Waterway (HMW), the Water





Quality Exchange (WQX), and the Assessment and Total Maximum Daily Load Tracking and Implementation System (ATTAINS). We will demonstrate tools that support the community aspect of watershed planning: environmental justice mapping and screening (EJSCREEN) and Social Indicators Data Management and Analysis (SIDMA). We will highlight outreach tools that can be utilized to increase awareness and engagement during WBP implementation.

Seven Economic Case Studies from California, Oklahoma, Pennsylvania, and New York Featuring “Soil Health Successful” Almond, Row Crop, and Dairy Producers

3:30 PM – 5:00 PM, Penrose 1 on Lower Level 1

Moderator: *Ellen Yeatman, American Farmland Trust*

Presenters: *Michelle Perez, American Farmland Trust; Aaron Ristow, American Farmland Trust; Michael Roots, Almond Board of California; Meg Greski, Oklahoma Conservation Commission*

To generate outreach and educational materials that directly answer producer questions about the economic benefits and costs of soil health practices, American Farmland Trust (AFT) in partnership with the Almond Board of California (ABC) and the Oklahoma Conservation Commission (OCC) developed two new California almond case studies and two first-ever Oklahoma corn-soy case studies featuring “soil health successful” producers. All four were developed using materials in the publicly available Retrospective Soil Health Economic Calculator (R-SHEC) Tool Kit. AFT will also present its first-ever Pennsylvania corn-soy case study and New York row-crop dairy farm case study—the latter using the Cornell Dairy Farm Business Summary instead of data collected by the R-SHEC Questionnaire.

Through a 2018 USDA Conservation Innovation Grant, AFT previously published nine economic case studies and the R-SHEC Tool Kit to help our fellow conservationists produce their own case studies. The R-SHEC Tool Kit provides instructions on gathering and analyzing data to produce a partial budget analysis estimating the economic effects of the adoption of soil health practices on a farm. The tool kit also supports use of Nutrient Tracking Tool and COMET-Farm Tool to estimate the effects of the adopted practices on water quality and greenhouse gases.

The AFT, ABC, and OCC authors will present the costs, benefits, and change in net income and the return on investment attributed to soil health practice use by each of their producers. Each author will discuss their experiences recruiting and interviewing soil health successful farmers, analyzing the data, and writing and distributing the case studies. Additionally, we will discuss how each team plans to use the case studies to get soil health curious farmers to say “yes” to soil health practices. This symposium will provide tips on how users may employ the R-SHEC Tool Kit to produce their own locally relevant case studies.



Stay Connected To Conservation Through the Association of Retired Conservation Service Employees (ARCSE)

- 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

Join Us!!

TUESDAY, AUGUST 2

SCHEDULE and EVENTS

SCHEDULE

- 7:30 AM – 5:00 PM** Registration Desk Open
Registration Area on Lower Level 2
- 8:00 AM – 10:00 AM** Opening Remarks and Plenary Session
Colorado Ballroom F-J on Lower Level 2
- 10:00 AM – 10:30 AM** Morning Break: Exhibit Hall and Poster Presentations Open
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2
- 10:30 AM – 12:00 PM** Concurrent Sessions
See pages 40-42
- 12:00 PM – 1:15 PM** Awards Luncheon
Colorado Ballroom F-J on Lower Level 2
- 1:30 PM – 3:00 PM** Concurrent Sessions
See pages 40-42
- 3:00 PM – 3:30 PM** Afternoon Break: Exhibit Hall and Poster Presentations Open
Colorado Ballroom A-E and Denver Ballroom 1-4 on Lower Level 2
- 3:30 PM – 5:00 PM** Concurrent Sessions
See pages 40-42
- 5:00 PM – 6:30 PM** Women in NRCS (WiN) Annual Meeting (Partner Event)
Pomeroy on 3rd Floor

EVENTS

Opening Remarks and Plenary Session

8:00 AM – 10:00 AM, Colorado Ballroom F-J on Lower Level 2

Address from USDA

Presenter: *USDA NRCS Chief Terry Cosby; USDA Under Secretary Robert Bonnie*

USDA NRCS Chief Terry Cosby and Under Secretary for Farm Production and Conservation, Robert Bonnie will open up the conference general session.




NRCS Chief Terry Cosby

leads a premier federal conservation agency known for its 3,000 field-office network that helps farmers, ranchers, and private forest landowners nationwide plan and carry out voluntary conservation activities on their operations.

During Cosby's more than 40-year career with NRCS, he has held numerous leadership and staff positions. He began his career as an NRCS intern in Iowa in 1979 and rose through the agency's ranks to become its 17th chief on May 24, 2021. Prior to his current position, he served as NRCS's Acting Chief for several months.

Chief Cosby's conservation and agricultural roots run deep. He grew up on his family's cotton farm and attended a land grant university that prepared him well to serve all producers, including those who were historically underserved. His childhood, education, and passion for conservation and agriculture paved the way for him to reach great heights throughout his NRCS career. Prior to being named Acting Chief, Cosby served as NRCS State Conservationist in Ohio for 16 years. His other leadership positions include Deputy State Conservationist in Idaho, Assistant State



Conservationist for Field Operations in Missouri, and Area Resource Conservationist in Iowa.

Cosby's great-grandfather purchased the family farm in Tallahatchie County, Mississippi, in the late 1800s. Terry, a Tallahatchie County native, earned his Bachelor of Science in Agricultural Education from Alcorn State University in Alcorn, Mississippi, the nation's first Black land grant college. Terry and his wife Brenda are the proud parents of four children. His leisure activities include hunting, fishing, and spending as much time as possible with his seven grandchildren.



Robert Bonnie is the Under Secretary for Farm Production and Conservation at USDA. Prior to his confirmation he served as Deputy Chief of Staff and Climate Advisor at USDA.

Before joining USDA, Bonnie was at Duke

University first as a Rubenstein Fellow and later as an Executive in Residence at the Nicholas Institute for Environmental Policy Solutions working on conservation and environmental issues in rural America.

In 2020, Bonnie also worked with the Bipartisan Policy Center on its Farm and Forest Carbon Solutions Initiative. He was Under Secretary for Natural Resources and Environment at USDA from 2013 to 2017, and a senior advisor to Secretary Tom Vilsack from 2009 to 2013.

Prior to joining USDA, Bonnie was vice president for land conservation at Environmental Defense Fund where he focused on developing incentives to reward stewardship on private lands.

Bonnie has master's degrees from Duke in forestry and environmental management. He lives with his wife, Julie, and daughter, Lilly, in Loudoun County, Virginia.

Building a "Foundation" to Elevate Soil Health

Presenter: *LaKisha Odom, Scientific Program Director for Soil Health at the Foundation for Food and Agriculture Research (FFAR)*

Foundations like the Foundation for Food and Agriculture Research (FFAR) provide essential support for the cutting edge research and innovative solutions needed to address pressing resource concerns across the nation. During this presentation, attendees will learn about work FFAR is supporting to bring conservation to scale in the face of climate change. Odom will also share how the work FFAR supports is expanding to include all communities equally. Learn about the components that take soil health projects from pilots to institutionalized programs with broader and greater local ownership and national impact, and the opportunities that lie ahead to elevate conservation to new heights.



LaKisha Odom is a scientific program director at the Foundation for Food and Agriculture Research where she leads scientific direction of the Soil Health Challenge and pursues her commitment to promoting the use

of innovative science, collective impact, and the development of public private partnerships to tackle today's complex challenges in food and agriculture.

At FFAR, Odom spearheads scientific direction of the Soil Health Challenge area and manages a portfolio of projects that address issues in sustainable water management, plant efficiency, ecosystem services, crop pest and disease detection, and development of the next generation of food and agricultural leaders.

Odom received her BS in environmental science from Tuskegee University, her MA in environmental resource policy from The George Washington University, and her PhD in integrative biosciences from Tuskegee University.

The Future of Farming

Presenter: *Quint Redmond, Agriburbia*

The wicked natural resource concerns we face will take crazy, creative solutions, and during this presentation, you will hear one of them!

Quint Redmond, local futurist, farmer, natural scientist, geospatial technologist, software developer, real estate developer, and in-demand speaker, has spent the last 25 years on a mission to raise the bar in both agriculture and development.

His early exposure to ranching and agriculture, combined with his continued experiences through life, have developed into a unique blend of expertise in technology, the natural sciences and development. He has received national recognition, including published work in CNU and Landscape Architecture, for his expertise in integrating commercial-scale agriculture into all aspects of both urban and rural design.

As co-creator of Agriburbia, Quint is blending agriculture and sustainable real estate development for the future of food, energy, and water, and for the health of people. Agriburbia has set an ambitious goal to create and integrate 30 million high quality, highly successful farmers in urban, suburban, and rural environments and thus improve both human and planetary health.

“We think that anyone who has the nerve to take soil, water, sun, and seeds and turn them into something wholesome and nutritious that another human being needs to sustain life is truly a HERO. There are only about one million of these heroes left, and it is getting harder and harder to find folks willing to take on these challenges. It is the mission of Agriburbia to change this trend and to make farming, agriculture, and all green industry pursuits the envy of all professions. After all, ‘... the farmers are the founders of civilization.’”

– Daniel Webster



Matthew C. (Quint)

Redmond, ASLA, is cofounder and managing member of TSR Agristruction LLC, and Agriburbia LLC. He has over 16 years of experience in owning and managing design and

spatial technologies firms, as well as 30+ years of experience in all areas of agriculture. He has received national recognition, including published work in CNU and Landscape Architecture, for his expertise in integrating commercial-scale agriculture into all aspects of both urban and rural design. Redmond has a bachelor's degree in geology from Tulane University, as well as a master's degree in urban and regional planning and a master's degree in landscape architecture from the University of Colorado. He is licensed as a landscape architect in Colorado and has consulted on agricultural development projects or has provided policy-related consulting in 15 states.

Awards Luncheon

12:00 PM – 1:15 PM, Colorado Ballroom F-J on Lower Level 2

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 Conservationist of the Year and Past-President Awards during this year's awards luncheon.

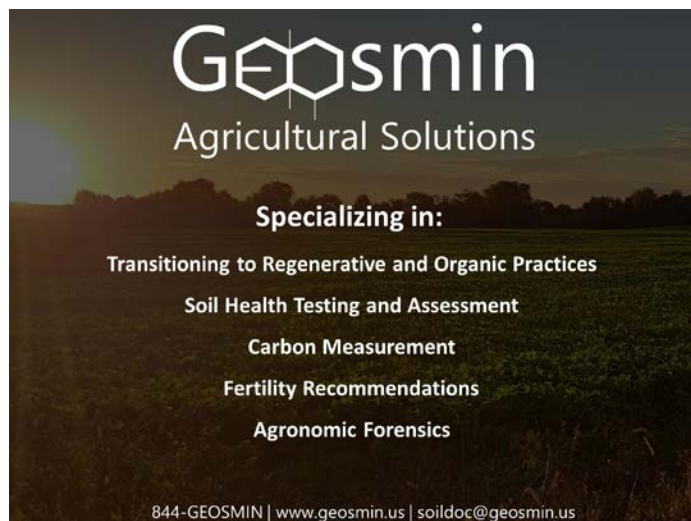
A ticket for this event is included with full conference registration and Tuesday-only registration. Additional tickets may be purchased online in advance for guests or at the registration table if available.

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

5:00 PM – 6:30 PM, Pomeroy on 3rd Floor

The National Organization of Professional Women in Natural Resources Conservation Service (WiN) will be hosting their annual organization meeting in person and via Zoom. From 5:00 pm to 5:30 pm Mountain Time there will be an informal meet and greet with the annual meeting starting promptly at 5:30 pm Mountain Time. The annual meeting will be used to present the WiN annual highlights of the year. The meeting is open to anyone interested in learning more about WiN. The mission for WiN is "To provide women with training, opportunities, and mentoring to develop into their fullest professional potential."

View the [WiN Annual Meeting Agenda](http://www.swcs.org/22ACpartnerevents) at www.swcs.org/22ACpartnerevents.



Congratulations 2022 WiN Award Winners!

- *Conservationist of the Year: Tracy Rosenberg, South Dakota
- *Individual Award of Excellence: Kathy Ferge, Oregon
- *Group Award of Excellence: (Handling Uncomfortable Situations Trainers) Jennifer Templeton & Allison Hammer, Virginia



Join WiN Today: [Apply for WiN Membership - WiN \(winnrcs.org\)](http://www.winnrcs.org)

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.

2022 WiN Executive Board
Val Hartman, President
Heather Medina Saucedo, Past President
Jeanne Hamilton – Executive Vice President
Jackie Byam – Vice President
Anne Pollok - Treasurer of Finance
Heather Hinson - Treasurer of Membership
April Wilson, Secretary

TUESDAY, AUGUST 2, 2022

7:30 AM - 5:00 PM	Registration Desk Open	Lower Level 2 Registration Area
8:00 AM - 10:00 AM	SWCS Opening Remarks - <i>Clare Lindahl, Soil and Water Conservation Society CEO and Dale Threatt-Taylor, Soil and Water Conservation Society Chair</i> ; Address from USDA - <i>USDA NRCS Chief Terry Cosby and Under Secretary Robert Bonnie</i> ; Building a "Foundation" to Elevate Soil Health - <i>LaKisha Odom, Foundation for Food and Agriculture Research (FFAR)</i> ; The Future of Farming - <i>Quint Redmond, Agriburbia</i>	Lower Level 2 Colorado Ballroom F-J
10:00 AM - 10:30 AM	Morning Break: Exhibit Hall and Poster Presentations Open	Lower Level 2 Colorado Ballroom A-E and Denver Ballroom 1-4
10:30 AM - 12:00 PM	SYMPOSIA SESSIONS	
Lower Level 1 Mattie Silks At the Intersection of Agriculture and Conservation	What Do Fish, Butterflies, and Bees Have in Common When It Comes to Conservation Projects? - <i>Caydee Savinelli, Syngenta Crop Protection</i>	
Lower Level 1 Penrose 1 Climate-Smart Agriculture	Lessons Learned from a Full Year of Measured Soil Health, Economic, and Social Indicators from 13 Conservation Innovation Grant On-Farm Demo Trials in California, Kentucky, New York, Massachusetts, and Connecticut - <i>Michelle Perez, American Farmland Trust</i>	
10:30 AM - 12:00 PM	ORAL PRESENTATIONS	
	10:30 AM	11:16 AM
Lower Level 1 Penrose 2 At the Intersection of Agriculture and Conservation	#DiverseCornBelt: Imagining a Pathway to a Resilient Future - <i>Linda Prokopy, Purdue University</i>	Understanding Barriers and Opportunities for Diffusion of a Decision-Support Tool: An Organizational Perspective - <i>Emily M. Usher, Purdue University</i>
Lower Level 1 Independence Conservation Models, Tools, and Technologies	Can Biochar Conserve Soil and Water? - <i>Humberto Blanco, University of Nebraska-Lincoln</i>	Nitrate Removal in Saturated Riparian Buffers in Iowa - <i>Gabriel M. Johnson, Iowa State University</i>
Lower Level 1 Gold Coin Soil Health Resources, Indicators, Assessment, and Management	An Evaluation of Soil Properties in Cropland and Natural Habitats in the Mississippi Delta - <i>Lindsey Witthaus, USDA ARS</i>	Soil Health Assessment under Different Land Management - <i>Maysoun M. Mikha, USDA ARS</i>
Lower Level 1 Matchless Water Resource Assessment and Management	The Iowa Watershed Approach: A Replicable Framework - <i>Kate Giannini, Iowa Flood Center</i>	Every Acre Matters: A Watershed Approach to Municipal Source Water Protection - <i>Mary Beth Stevenson, City of Cedar Rapids</i>

12:00 PM - 1:15 PM	Awards Luncheon	Lower Level 2 Colorado Ballroom F-J			
1:30 PM - 3:00 PM	SYMPOSIA SESSIONS				
Lower Level 2 Denver Ballroom 5-6 On the Frontier of Conservation in the West	Soil Health in the West: Partnerships and Perspectives from a National, Regional, and State Level - Judy L. Bloom, US Environmental Protection Agency				
Lower Level 1 Mattie Silks Outreach, Education, and Community Engagement	Women in Agriculture: Using Influence for Positive Change - Jackie Byam, National Organization of Professional Women in Natural Resources Conservation Service (WIN)				
1:30 PM - 3:00 PM	ORAL PRESENTATIONS				
	1:30 PM	1:53 PM	2:16 PM	2:39 PM	
Lower Level 1 Penrose 1 Adaptive Management of Conservation Efforts	Big BMPs on Campus: Monitoring a Systems Approach to Nutrient Loss Reduction on Illinois Central College's Demonstration Farm - Jill Kostel, The Wetlands Initiative	Constructed Wetland Design, Operation, and Maintenance: Lessons Learned to Ensure Wetland Longevity and Nutrient Reduction Efficiencies - Krista G. Kirkham, The Nature Conservancy	Ecosystem Services Technical Enrollment Training - Stacy Cushmanberry, Ecosystem Services Market Consortium	Nutrient Tracking Tool (NTT): Evaluation of Conservation Practices of Tile Drainage Systems - Ali Saleh, Tarleton State University	
Lower Level 1 Penrose 2 At the Intersection of Agriculture and Conservation		Dubuque County Invests in Watershed Impacts through Innovative Pay-for-Performance Partnership - Eric Schmechel, Dubuque Soil and Water Conservation District	Remote Sensing of Winter Flooded Agricultural Fields for Migratory Birds in the Mississippi Alluvial Plain - Thomas P. Dill, Arkansas State University	Shell Creek Watershed Survey Indicates Water Quality Perceptions and Land Management Practices - Katie Pekarek, University of Nebraska	
Lower Level 1 Independence Climate-Smart Agriculture	Advancing Water Quality and Conservation through Climate-Smart Bridge Payments to Farmers - Brad Jordahl Redlin, Minnesota Department of Agriculture	Rangeland Compost Amendments Improve Productivity and Methane Uptake - Eva Stricker, Quivira Coalition	The Biogas Revolution: Climate-Smart but Conservation-Foolish? - Daniel L. Miller, Duke Environmental Law and Policy Clinic		
Lower Level 1 Gold Coin Conservation Economics and Policy	Conservation Agriculture and Supply Chain Development in the "Kentucky Commercial Rye Cover Crop Initiative" - Scott Franklin, American Farmland Trust	Field Days Feel Good, but Alternative Funding and Practice Delivery Models Move the Needle for Practice Adoption - Keegan J. Kult, Ag Drainage Management Coalition	Increasing Potato Profitability through Rotation Systems and Winter Cover, Efficient Use of Water, Nitrogen Fertilizer, and Conservation Tillage - Mohammad Khakbazan, Agriculture and Agri-Food Canada	Launching a Soil Health Conservation Easement Program - Niki Reynolds, Whiterock Conservancy	
Lower Level 1 Matchless Conservation Models, Tools, and Technologies	Evaluating Conservation Practices Effect on Nitrogen Leaching and Water Use Efficiency in Processing Tomatoes - Iael Raji Hoffman, UC Davis	Improving Land Management Decisions through Airborne Electromagnetic Mapping of Shallow Depth to Bedrock in Northeast Wisconsin - Matt Komiskey, USGS	The Great Lakes to Gulf Virtual Observatory: A Decision Support Tool for Effective Planning and Deployment of Conservation Best Management Practices Focused on Nutrient Reduction in the Mississippi River Basin - Ellen Gillsky, Ellen Gillsky, LLC	Weather Factors in Smoke Management of Prescribed Burning in the Flint Hills Region - Zifei Liu, Kansas State University	

3:00 PM - 3:30 PM	Afternoon Break: Exhibit Hall and Poster Presentations Open			Lower Level 2 Colorado Ballroom A-E and Denver Ballroom 1-4
3:30 PM - 5:00 PM	SYMPOSIUM SESSIONS			
Lower Level 2 Denver Ballroom 5-6 At the Intersection of Agriculture and Conservation	Conservation Practice Adoption: An Evidence-Based Comparison of Adopters and Nonadopters - <i>Seth Harden, The Nature Conservancy; Lourival Carmo Monaco Neto, Purdue University</i>			
Lower Level 1 Mattie Silks Climate-Smart Agriculture	Practical Approaches to Scaling Quality in Transformational Agriculture - <i>Jamie Ridgely, Truterra</i>			
Lower Level 1 Penrose 1 Social Sciences Informing Conservation	Social and Behavioral Targeting of Conservation Programs for Increased Effectiveness - <i>Kristina M. Slagle, The Ohio State University</i>			
3:30 PM - 5:00 PM	ORAL PRESENTATIONS			
	3:30 PM	3:53 PM	4:16 PM	4:39 PM
Lower Level 1 Penrose 2 At the Intersection of Agriculture and Conservation	Automated Probabilistic Co-Occurrence Assessments for Pesticides and Federally Listed Species - <i>Jonnie B. Dunne, Stone Environmental</i>	Companion Cropping of Spring Canola and Spring Peas in Eastern Oregon - <i>Don J. Wysocki, Oregon State University</i>	Ten Years of Change in Pest Management Practice Adoption: Summary of Conservation Effects Assessment Project Results - <i>Brianna Henry, USDA NRCS</i>	
Lower Level 1 Independence On the Frontier of Conservation in the West/Conservation in Organic, Specialty, Small-Scale, or Urban Agriculture	Improving Sustainable Irrigation Practices in Onion Production in Imperial County, California - <i>Jairo Diaz, University of California</i>	Securing the Future of Highly Productive Organic No-Till Vegetable Cropping Systems in California - <i>Tom Willey, T&D Willey Farms</i>	Using Integrated Modeling to Simulate Environmental Impacts of Increases in Local Table Food Production around Urban Centers in the Midwest - <i>Philip W. Gassman, Iowa State University</i>	
Lower Level 1 Gold Coin Soil Health Resources, Indicators, Assessment, and Management		Evaluation of Current Rangeland Conditions and Trends on Nonfederal Rangeland Community Types - <i>Kenneth Spaeth USDA NRCS</i>	Grazing Management Modifies the Biomass and Activities of Soil Microorganisms in Grasslands - <i>Michael Lehman, USDA ARS</i>	The Interactive Effect of Cover Crop Diversity and Tillage Type on Corn Yield - <i>Victoria N. Snyder, University of Guelph</i>
Lower Level 1 Matchless Water Resource Assessment and Management	Rainfall-Runoff Models Compared for Tile Drained Agricultural Fields in the Western Lake Erie Basin, Ohio - <i>Carl Bolster, USDA ARS</i>	Relating Carbon and Nitrogen Transport from Constructed Farm Drainage - <i>Anthony Seeman, Iowa Soybean Association</i>	Reducing Nitrate Loads in Subsurface Tile Runoff through Denitrification in a Woodchip Bioreactor in Northeast Wisconsin - <i>Krista A. Hood, USGS</i>	The Effects of Channel and Tillage on Runoff and Sediment in Subsequent Runoff Events in Fields under Bare Ground Condition - <i>Sheng Li, Frederick Research and Development Centre</i>
5:00 PM - 6:30 PM Partner Event	Women in NRCS (WIN) Annual Meeting			3rd Floor Pomeroy



TUESDAY, AUGUST 2

SYMPOSIA SESSIONS

What Do Fish, Butterflies, and Bees Have in Common When It Comes to Conservation Projects?

10:30 AM – 12:00 PM, Mattie Silks on Lower Level 1

Moderator: *Caydee Savinelli, Syngenta*

Conservation projects for fish, butterflies, and bees have a number of things in common, including providing needed forage and habitat. These projects also have multifunctional benefits for an array of species as well as protecting water bodies and creating buffers along field margins in farm landscapes. However, when it comes to each conservation project, one size does not fit all, and considerations need to be made relative to the type of habitat restoration and species requirements. This symposium will present examples from nongovernment and crop commodity organizations that are implementing on-the-ground forage and habitat restoration projects for fish, butterflies, and bees. The California Rice Commission is working on a conservation project by using “surrogate wetlands,” also known as rice fields, to help Chinook salmon in the Sacramento Valley. The Bee and Butterfly Habitat Fund provides habitat establishment expertise and seed mixtures, for both honey bees and monarch butterflies, for landowners across the Midwest. The Iowa Soybean Association is working with farmers and landowners on oxbow restoration for the Topeka shiner and habitat restoration for the rusty patched bumble bee, which are both listed as endangered via the Endangered Species Act.

Presentation 1: Winter-Flooded Rice Fields as Rearing Habitat for Juvenile Chinook Salmon (*Oncorhynchus tshawytscha*) – *Paul Buttner, California Rice Commission*

Presentation 2: Creating a Big Tent for Conservation Projects Including Butterflies and Bees – *Pete Berthelsen, Bee and Butterfly Habitat Fund*

Presentation 3: What Do Bees and Fish Have to Do with Soybeans? – *Brandon Iddings, Iowa Soybean Association*

Lessons Learned from a Full Year of Measured Soil Health, Economic, and Social Indicators from 13 Conservation Innovation Grant On-Farm Demo Trials in California, Kentucky, New York, Massachusetts, and Connecticut

10:30 AM – 11:00 AM, Penrose on Lower Level 1

Moderator: *Michelle Perez, American Farmland Trust*

Presenters: *Ellen Yeatman, American Farmland Trust; Aysha Tapp Ross, American Farmland Trust; June Grabemeyer, American Farmland Trust; Aaron Ristow, American Farmland Trust; Scott Franklin, American Farmland Trust*


American Farmland Trust (AFT) kicked off our five-year On-Farm Soil Health Demonstration Trial (SHDT) Conservation Innovation Grant (CIG) project, “Conquering Cover Crop Challenges from Coast to Coast” in March of 2021. To address the low national cover crop adoption rate (5%), AFT developed a CIG SHDT to identify, evaluate, support, and showcase farmer-driven transitions to improving soil health through adoption of cover crops or modification of cover crop management. Thirteen producers in five states adopted cover crops, either alone or in combination with no-till, nutrient management, compost application, or unique termination strategies, and will be sharing their challenges, progress, and lessons learned with their community.

AFT is collaborating with the following producers:

- 2 California (almond, grape)
- 4 Kentucky (row crops)
- 2 Connecticut (dairy)
- 1 Massachusetts (dairy)
- 4 New York (row crop, dairy)

We will share soil health, economic, and social indicator results thus far for participating farmers based on the following analyses:

- In-Field NRCS Soil Health Assessments that qualitatively evaluate whether 11 indicators



meet threshold criteria to assess the soil for four NRCS-defined soil health resource concerns

- Cornell Soil Health Laboratory's Comprehensive Assessment of Soil Health that quantitatively evaluate soil samples for 15 soil health indicators as they relate to other soil samples within soil textural groups
- Partial budget economic analysis using field operations data to compare the costs and benefits observed on the treatment and control plots
- Social indicators reflecting motivations for using soil health practice (e.g., top three soil health outcomes desired, concerns about adopting the new practices, etc.)

Also, we will share lessons learned from the AFT state staff interacting directly with the farmers, and the AFT national initiative staff coordinating the analyses.

Soil Health in the West: Partnerships and Perspectives from a National, Regional, and State Level

1:30 PM – 3:00 PM, Denver Ballroom 5-6 on Lower Level 2

Moderator: *Judy L. Bloom, US Environmental Protection Agency*

Soil health management in the West presents many challenges given the arid and sometimes extreme weather occupying the region. However, this also presents additional opportunities for soil conservation and water quality given the unique climactic conditions and agricultural needs. US EPA can support soil health management through its Nonpoint Source/319 program. Many states in EPA Region 8 (covering North Dakota, South Dakota, Montana, Wyoming, Colorado, and Utah) have soil health programs in place to incentivize and accelerate the adoption of soil health practices. These include statewide programs, coalitions, training opportunities, and innovative financing approaches. For example, the Colorado Department of Agriculture (CDA) has implemented a Soil Health Program, which will promote education about soil health, encourage voluntary, widespread adoption of soil health practices, increase producer profitability, and advance the scientific understanding of soil

health through grants, a soil health inventory and soil testing system, and other voluntary-based programs. In recent years, the Colorado water quality agency, Colorado Department of Health and the Environment (CDPHE), has prioritized soil health and water quality management in its state nonpoint source program and has documented water quality improvements due to soil health implementation in focused watersheds in the states. Colorado State University has quantified the impacts of soil health management systems on water quality. In this symposium, we will present perspectives from a national, regional, and state level on agricultural conservation opportunities with the 319 program and beyond.

Presentation 1: How the US EPA National 319 Program Supports Soil Health – *Whitney King, US Environmental Protection Agency*

Presentation 2: Western Resilience and Soil Health – *Riley Dayberry, USDA NRCS*

Presentation 3: Colorado's Soil Health Program Launch – *Cindy Lair, Colorado Department of Agriculture*

Presentation 4: Colorado's Agricultural Water Quality Program: Insights on Water Quality and Soil Health – *Erik Wardle, Colorado State University*

Presentation 5: Soil Health Practices in a Semi-Arid Environment....Challenge Accepted – *Derek White Heckman, Local Farmer*

Women in Agriculture: Using Influence for Positive Change

1:30 PM – 3:00 PM, Mattie Silks on Lower Level 1

Moderator: *Jackie Byam, National Organization of Professional Women in Natural Resources Conservation Service (WiN)*

Presenters: *Caitlin Joseph, American Farmland Trust; Kriss Marion, Landowner/Producer and Wisconsin Women in Conservation; Tanya Meyer-Dideriksen, USDA NRCS*

The 2017 USDA's Census of Agriculture showed that 36% of US farmers are women and 56% of all farms have at least one female decision maker, compared to 91% with one or more male producers. These female-operated farms accounted for 38% of US agricultural sales and 43% of US farmland.

Many states and organizations are developing education and outreach programs to empower women farmers and landowners to use their voices for positive change in their communities through education, networking, and participation in listening circles and field days.

This panel discussion will explore how federal, state and local governments; nonprofit and faith-based organizations; and agricultural businesses are partnering to provide resources and guidance to female landowners and operators, encouraging them to use their voices and experience to leverage conservation on their lands.

Conservation Practice Adoption: An Evidence-Based Comparison of Adopters and Nonadopters

3:30 PM – 5:00 PM, Denver Ballroom 5-6 on Lower Level 2

Moderator/Presenter: *Seth Harden, The Nature Conservancy*

Presenter: *Lourival Carmo Monaco Neto, Purdue University*

Many studies have explored how farmers' demographical and behavioral aspects affect conservation practices adoption (Prokopy et al. 2019). Farm size, livestock number, and other farm characteristics, for instance, have been positively associated with conservation practices adoption (Prokopy 2008).

Our study, using data from the Purdue University Center for Food and Agribusiness Large Commercial Producer Survey conducted in 2021, differentiates itself by analyzing a large number of farmer respondents (1,570 observations), giving it a robust statistical backbone, but also the intention of broadening the body of knowledge on the subject. Primary US farm operations represented were corn/soybean, wheat/barley, cotton, fruits/vegetables, dairy, cattle, and swine. Respondent US farms were also categorized based on their sizes into small, mid-size, and commercial/large groups.

This research has the goal of identifying and understanding the differences in behavioral and demographics variables between farmers who adopt agricultural conservation practices on their farms and



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those who don't. The analysis will be comprised of farmers' answers to relevant questions asking about conservation practices adoption. Key covariates will be in two groups. The first group consists of demographical characteristics questions such as gender, age, and highest level of education. The second group includes questions related to farmers' experiences and preferences regarding conservation practice adoption, such as decision-making style (intuitive vs. analytical), and attitudes toward dealers/retailers. Through graphics and tables, we will explore these differences and discuss, building upon previous literature to help understand them.

An interactive and conversational environment will be created in which app-based polling systems and questioning will be used with the purpose of engaging the audience, challenging the presenters and peers, and searching for connections in the data and outside of it.

Practical Approaches to Scaling Quality in Transformational Agriculture

3:30 PM – 5:00 PM, Mattie Silks on Lower Level 1

Moderator: *Jamie Ridgely, Truterra*

Presenters: *Jason Ackerson, Soil Health Institute; Jack Carlson, Colorado State University*

Growing ESG commitments, coupled with increasing scrutiny over the potential for greenwashing, is creating a market hungry for high-quality, soil-based carbon assets. Yet how does one deliver those quality assets within a fragmented, tradition-bound industry constrained by low margins? For Truterra, the sustainability business of Land O'Lakes, the answer has been a combination of practical, field-based management approaches coupled with a menu of support services and anchored in the trusted farmer-ag retailer relationship. This symposium explores the approach Truterra has taken to drive transformational agriculture by meeting farmers where they are, connecting them to the resources and information required for a successful, sustainable transition, and delivering these critical services through Truterra's network of progressive, sustainability-minded ag retailers. The Truterra support network provides a comprehensive approach to supporting practice change; where most offers are focused on a sole aspect like


the financial offer, this network offers a systems approach that includes educational, agronomic, technological, and financial resources. Working in collaboration with the Soil Health Institute and Colorado State University, Truterra is balancing market needs for quality and data integrity (monitoring, reporting, and verification [MRV]) with farmer and retailer needs for simplicity, flexibility, and agronomics.

Social and Behavioral Targeting of Conservation Programs for Increased Effectiveness

3:30 PM – 5:00 PM, Penrose 1 on Lower Level 1

Moderator: *Kristina M. Slagle, The Ohio State University*

Privately owned lands are an inescapable conservation challenge in much of the central and eastern United States, where efforts to protect land and water must engage diverse landowners. From wetland mitigation and creation to best management practices in farming to accessible lands for outdoor recreation, private landowners are the gatekeepers to action at large spatial scales, even though most landowners control an individually small footprint. Herein lies the challenge. With limited public lands in much of the United States, the bulk of conservation has traditionally occurred through voluntary, incentive-based programs on private lands. The effectiveness of such programs is limited by the amount of funding available, and by the distribution of funds to those who self-select into participation. Unfortunately, the lands of highest conservation value (whether that be wetlands for migratory birds or locations critical for improving downstream water quality) may not be those owned or managed by the individuals opting into conservation programs. Better targeting of limited funds for conservation to the people and places where they are most needed to support conservation goals may be necessary in these highly privatized landscapes. To this end, this symposium brings together five researchers working in the eastern Corn Belt to discuss social and behavioral targeting of investments. Specifically, panelists will present empirically driven solutions to overcoming behavioral (e.g., basic need satisfaction among landowners) and structural (e.g., parcel size) barriers for individuals managing high value land and identifying groups of landowners with different



preferences and payment thresholds who can be differentially engaged through more customized, budget-conscious payment programs. Each panelist will give a five-minute overview of their work, followed by Q&A and a discussion of the feasibility and effectiveness of targeting conservation funds for greater return on investment.

Presentation 1: Crafty Conservation Programs: Don't Hit Me with a Stick and I Don't Like Carrots – *Gabriel R. Karns, The Ohio State University*

Presentation 2: Hunting for Private Lands Access – *Kristina M. Slagle, The Ohio State University*

Presentation 3: Conservation Targeting for Constructed Wetlands – *Robyn S. Wilson, The Ohio State University*

Presentation 4: Teasing Out the Effects of Industrialization on Conservation Practices – *Gillian Chesnut, The Ohio State University*

Presentation 5: Values, Identity, and Basic Needs Satisfaction as Motivators of Farmer Conservation Behavior – *Carrie Dale Shaffer-Morrison, Ohio State University*



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WEDNESDAY, AUGUST 3

SCHEDULE and EVENTS

SCHEDULE

7:00 AM – 12:00 PM Registration Desk Open
*Registration Area on
Lower Level 2*

8:00 AM – 4:00 PM *Tour 1: Wildfire Mitigation and
Recovery in Colorado
*Meet at California
Street Entry on Lobby
Level at 7:40 AM*

8:30 AM – 10:00 AM Concurrent Sessions
See pages 50-51

10:00 AM – 10:30 AM Morning Break

10:30 AM – 12:00 PM Concurrent Sessions
See pages 50-51

12:00 PM Conference Adjourns

1:00 PM – 5:00 PM *Tour 2: Women in Agriculture
Tour
*Meet at California
Street Entry on Lobby
Level at 12:40 PM*

1:00 PM – 5:15 PM *Tour 3: Downtown Denver
Conservation Walking Tour
*Meet at California
Street Entry on Lobby
Level at 12:40 PM*

1:00 PM – 5:00 PM USDA Conservation Effects
Assessment Project (CEAP)
*Denver Ballroom 1–3
on Lower Level 2* Watershed Assessment Studies
Annual Meeting (Partner Event)

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

EVENTS

Conservation Tours

All participants of tours should meet at the doors on the lobby level near the California Street entrance at least 20 minutes prior to the departure times listed.


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: Wildfire Mitigation and Recovery in Colorado

8:00 AM – 4:00 PM

This tour, organized in tandem with the SWCS Colorado Chapter and the US Forest Service, will delve into wildfire recovery and mitigation on the Pike National Forest, as well as forest practices related to forest sustainability and resiliency. Wildland fires have the potential to fulfill key ecosystem services, such as improving wildlife habitat and reducing forest undergrowth that can fuel severe wildfires. However, high severity wildfires can threaten human life and safety, homes and infrastructure, and natural and cultural resources.

According to the Colorado Division of Fire Prevention and Control, 20 of Colorado's 20 largest wildfires have occurred in the last 20 years (since 2001). During the tour, speakers will discuss wildfire recovery, forest sustainability, competing resources, and the importance of partnership development. Attendees will visit the Sand Spring and Spring Creek Treatment Areas. The Pike National Forest and Hayman burn scar have a unique soil type—Pikes Peak Decomposed Granite. This soil type presents a unique challenge to wildfire mitigation and recovery because of its high erodibility.



This tour will also highlight the effects of fire on water resources and watershed management. Attendees will hear from community stakeholder Denver Water, who will discuss municipal water supplies and partnership projects.

A picnic lunch will be provided. View the [Tour 1 Agenda](#) at www.swcs.org/22ACtours.

Tour 2: 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 owned and operated by women. The farms are located in Denver and Boulder counties, within 50 miles of the conference center. Each producer will host participants on their farm and/or ranch and give a tour of the operations. They will also share their stories of achievements and struggles while describing how they overcame obstacles. The 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/22ACtours.

Tour 3: Downtown Denver Conservation Walking Tour

1:00 PM – 5:15 PM

See the city of Denver through the eyes of its conservation professionals! During this four-hour guided walking tour, participants will visit stops featuring speakers on a variety of topics, such as Indigenous cultural impacts, cutting-edge urban farming, and green infrastructure. Specifically, learn about the recently completed, unprecedented Urban Soil Survey of Denver County from Andy Steinert, NRCS Major Land Resource Area (MLRA) Soil Survey Leader. Immerse yourself in the history of Indigenous land use in the region. Also, discover how the City of Denver is utilizing green infrastructure to be climate change resilient and enhance community livability. Note: This will be an active walking tour, although there will be rest stops and opportunities for photos along the way!

View the [Tour 3 Agenda](#) at www.swcs.org/22ACtours.

USDA Conservation Effects Assessment Project (CEAP) Watershed Assessment Studies Annual Meeting (Partner Event)

1:00 PM – 5:00 PM, Denver Ballroom 1–3 on Lower Level 2

Please join USDA's NRCS and ARS and university CEAP scientists to learn about and discuss the CEAP Watershed Assessments in small watershed studies. This year's meeting will take place Wednesday, August 3, 1:00 to 5:00 pm MT, just after the conclusion of the general SWCS conference program. Presentations in the CEAP meeting will feature ongoing ARS and university CEAP Watershed Assessments followed by a presentation on a visioning process to address future CEAP directions. If you have an interest in outcomes and documenting benefits of conservation, please join us and provide your input into future research!

As USDA travel restrictions evolve, please periodically check the SWCS website, www.swcs.org/22AC, under Partner Events for updates concerning a CEAP meeting on site or virtually.

View the [CEAP Annual Meeting Agenda](#) at www.swcs.org/22ACpartnerevents.



WEDNESDAY, AUGUST 3, 2022			
7:00 AM - 12:00 PM	Registration Desk Open		Lower Level 2 Registration Area
TOURS			
8:00 AM - 4:00 PM	Tour 1: Wildfire Mitigation and Recovery in Colorado (ticket required, additional fees apply) (meet at 7:40 AM)		Meet at California Street Entry Lobby Level
8:30 AM - 10:00 AM	SYMPOSIUM SESSIONS		
Lower Level 1 Mattie Silks Climate-Smart Agriculture	The Cutting Edge of Carbon Markets: Opportunities for Profit from Sequestration - Joe Otto, Soil and Water Conservation Society and Adam Chambers, USDA NRCS		
Lower Level 1 Penrose 1 On the Frontier of Conservation in the West	Using USDA NRCS Conservation Practice Standards in Innovative Ways - Dana Ashford-Kornburger, USDA NRCS		
8:30 AM - 10:00 AM	ORAL PRESENTATIONS		
	8:30 AM	8:53 AM	9:16 AM
Lower Level 1 Penrose 2 Adaptive Management of Conservation Efforts	Cover Crop Seeding Rate Effects on Production and Water Quality - Paul De Laune, Texas A&M Agrilife	Dynamics of Soil Organic Carbon and CO ₂ Flux Under Cover Crop and No-Till Management in Soybean Cropping Systems of the Mid-South - Alexandra G. Firth, Mississippi State University	Perception, Value, and Governance of Ecosystem Services in Ecuador - Roberto S. Navarrete Arias, University of Massachusetts at Amherst
Lower Level 1 Independence At the Intersection of Agriculture and Conservation	Leading at the Edge: Partnerships to Identify and Scale Structural Conservation Practices - Jessica D'Ambrosio, The Nature Conservancy	Leveraging Agribusiness Advisers Trusted Relationship with Farmers - Leif Fixen, The Nature Conservancy	Redefining Stakeholder Analysis: Foundation for Successful Stakeholder Engagement - Anil Kumar Chaudhary, The Pennsylvania State University
Lower Level 1 Gold Coin Conservation Models, Tools, and Technologies	Updated Erosivity Values for the Conterminous United States - Ryan McGehee, Purdue University	Effects of Updated US Climate Data and Erosivity Factors on RUSLE2 Soil Erosion Predictions - Dennis C. Flanagan, USDA ARS	Precipitation Influence on the Soil Vulnerability Index Classification - Allen Thompson, University of Missouri
Lower Level 1 Matchless Outreach, Education, and Community Engagement	Bringing Urban and Rural Communities Together to Improve Water Quality in the Little Arkansas Watershed - Ronald Graber, Kansas State University	Engaging Urban Watershed Stewards in Stormwater Management - Amanda Gumbert and Lee Moser, University of Kentucky	Upscaling Small Plot Water Quality Data to Greater Downslope Distances - John E. Gilley, USDA ARS

10:00 AM - 10:30 AM	Morning Break			
10:30 AM - 12:00 PM	SYMPOSIA SESSIONS			
Lower Level 1 Mattie Silks Conservation Models, Tools, and Technologies	Driving Action through a Practice-Based Approach to Sustainability Assessments: The Sustainable Outcomes in Agriculture Standard - Steven Wall, Syngenta			
Lower Level 1 Penrose 1 Soil Health Resources, Indicators, Assessment, and Management	Soil Health in the United States: Regional Differences and Considerations - Jorge Delgado, USDA ARS			
10:30 AM - 12:00 PM	ORAL PRESENTATIONS			
	10:30 AM	10:53 AM	11:16 AM	11:39 AM
Lower Level 1 Penrose 2 At the Intersection of Agriculture and Conservation	Effects of Land Application of Reclaimed Wastewater on Surface Water Quality - Amita Jain, Florida A&M University	How Can Wetland Restoration Efforts be Best Prioritized to Improve Water Quality? - Lily Kirk, US Environmental Protection Agency	Iowa Soybean Association Conservation Agronomist Network - Heath Ellison, Iowa Soybean Association	
Lower Level 1 Independence Climate-Smart Agriculture	Biomass Productivity and Decreased Nitrogen Input from Planting Green in Western New York - Aaron Ristow, American Farmland Trust	Changing Precipitation Patterns Affecting Mediterranean Small Farmers: Adaptation Outreach for Climate Resilience - Zouheir Massri, Michigan State University	Effect of Crop Residue Management on Grain Yield and Soil Properties in the Upper Midwest - Jodi DeJong-Hughes, University of Minnesota Extension	Soil Greenhouse Gas Emissions and Microbial Community Structure of a Central Texas Corn-Corn-Cotton Rotation - Dorothy Menefee, USDA ARS
Lower Level 1 Gold Coin Social Sciences Informing Conservation	Characterizing Success within Farmer-Led Networks across the United States - Linda Prokopy, Purdue University	Factors Influencing Farmers' Willingness to Use Extended Rotations: A Comparative Study in Indiana and Iowa - Ayorinde Ogunyiola, Purdue University	Factors Influencing Farmers' Engagement in Watershed Management Activities - Suraj Upadhyaya, Iowa State University	Predictors of Farmers' Openness to or Adoption of 4R Plus Practices in Iowa - Lijing Gao, Iowa State University
Lower Level 1 Matchless Water Resource Assessment and Management	Colorado's Agricultural Water Quality Program: Insights on Water Quality and Agricultural Soil Health - Erik Wardle, Colorado State University	Considering Sustainable Water Management in the Eastern Himalayan Mountains of Northeast India - Udai Singh, Mississippi Watershed Management Organization	Evaluating Trends in Stream Water Quality Associated with Agricultural Conservation within the Great Lakes Restoration Initiative Priority Watershed Program - Matthew A. Pronschinske, USGS	Effects of Agricultural Conservation Practices on Lake Water Quality and Harmful Algal Blooms - Richard E. Lizotte, USDA ARS
	TOURS			
1:00 PM - 5:00 PM	Tour 2: Women in Agriculture Tour (ticket required, additional fees apply) (meet at 12:40 PM)			Meet at California Street Entry Lobby Level
1:00 PM - 5:00 PM	Tour 3: Downtown Denver Conservation Walking Tour (ticket required, additional fees apply) (meet at 12:40 PM)			Meet at California Street Entry Lobby Level



WEDNESDAY, AUGUST 3

SYMPOSIA SESSIONS

The Cutting Edge of Carbon Markets: Opportunities for Profit from Sequestration

8:30 AM – 10:00 AM, Mattie Silks on Lower Level 1

Moderator: *Joe Otto, Soil and Water Conservation Society and Adam Chambers, USDA NRCS*

Sponsored by members of SWCS's Science and Policy Committee, "The Cutting Edge of Carbon Markets: Opportunities for Profit from Sequestration" brings together leaders in academia, policy, and the public and private sectors, into a discussion about the state of the science, the positioning of policy, and opportunities for carbon markets to profitably advance conservation practices.

Presentation 1: Potential of Conservation Practices to Sequester Carbon – *Humberto Blanco, University of Nebraska*

Presentation 2: Opportunities and Challenges in the Carbon Markets – *John Shanahan, Agoro Carbon Alliance*

Presentation 3: Providing Farmers and Ranchers with Access to Ecosystem Service Market Opportunities – *Debbie Reed, Ecosystem Services Marketplace*

Presentation 4: Increasing Credibility and Access to Agricultural Climate Markets – *Sarah Alexander, Keystone Policy Center*

Using USDA NRCS Conservation Practice Standards in Innovative Ways

8:30 AM – 10:00 AM, Penrose 1 on Lower Level 1

Moderator: *Dana Ashford-Kornburger, USDA NRCS*

The USDA NRCS Conservation Practice Standards (CPS) are science-based and developed to address resource concern needs. They are regularly reviewed and updated to include innovative technologies and methodologies. Practices complement the conservation plan and can be used alone or as a part of a comprehensive system. Join agency technical discipline leads as they provide an overview of some CPS to highlight recent changes and innovative implementation. The symposium will include presentations on conservation planning and

practices for feed management, pollinator habitat, rangeland plant communities, and air quality.

Presentation 1: How NRCS Refines and Enhances Conservation Practice Standards to Incorporate Innovations and Meet Conservation Needs – *Dana Ashford-Kornburger, USDA NRCS*

Presentation 2: Review (or Introduction) to Feed Management – *Greg Zwicke, USDA NRCS*

Presentation 3: Practices for Pollinator Habitat – *Ed Henry, USDA NRCS*

Presentation 4: Conservation Practices for Carbon Storage – *Laurie Schoonhoven, USDA NRCS*


Presentation 5: Practices to Improve Air Quality – *Greg Zwicke, USDA NRCS*

Driving Action through a Practice-Based Approach to Sustainability Assessments: The Sustainable Outcomes in Agriculture Standard

10:30 AM – 12:00 PM, Mattie Silks on Lower Level 1

Moderator/Presenter: *Steven Wall, Syngenta*

Syngenta Sustainable Solutions has developed the Sustainable Outcomes in Agriculture Standard (SOA) to provide a framework to help agricultural value chain companies and crop producers improve outcomes in regenerative agriculture. The SOA was developed for crop production operations to provide a scalable and easy on-ramp for a wide array of producers and supply chain companies to engage in improving on-farm sustainability. Recognizing that not all producers are at the same level of performance in delivering sustainable outcomes on their farm, Leadership Performance Levels are included in the SOA to differentiate producers and connect each producer to relevant opportunities for continuous improvement. The SOA is a globally applicable standard that measures regenerative and sustainable agriculture practices and decision making. It provides a framework for supply chains to monitor and track progress against sustainable outcomes while identifying improvement



opportunities within their sourcing region. Syngenta is implementing the SOA through the Cropwise Sustainability (CWS) platform, providing easy-access to farmers through a mobile-friendly application. The CWS app allows growers to simply answer questions about their farming operation and receive a report of their performance against sustainable outcomes, identify opportunities for improvement, and use those insights for continuous improvement planning for their operation. We will discuss the sustainability outcomes and drivers in the SOA, its implementation via the app, and insights from those who have used the standard in their operations and supply chains.

Soil Health in the United States: Regional Differences and Considerations

10:30 AM – 12:00 PM, Penrose 1 on Lower Level 1

Moderator: *Jorge Delgado, USDA ARS*

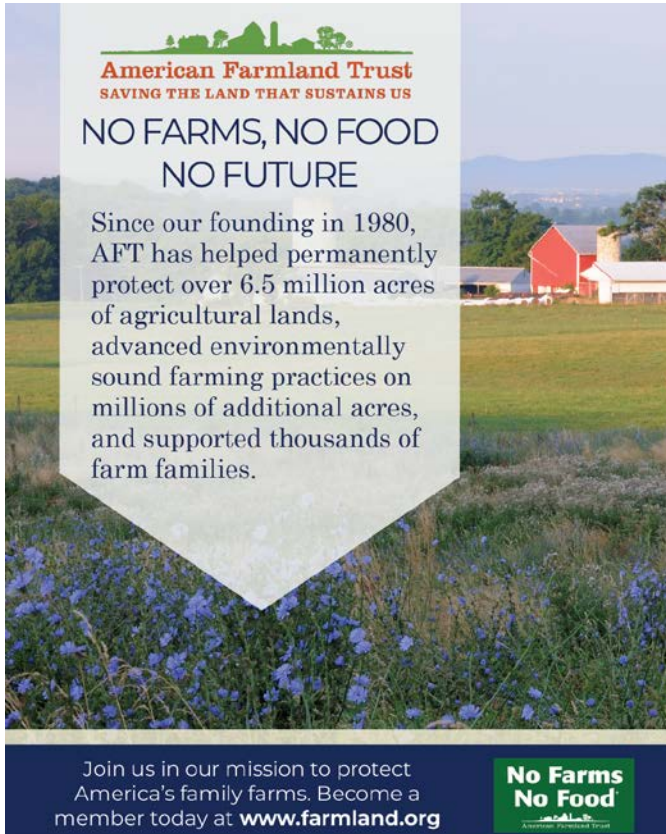
Soils are a critically important part of the environment. They play a vital role in food production, water purification, carbon and nutrient cycling, and climate modulation, among others. However, soils are at a constant threat of degradation or loss due to management and land development. Given these challenges, there is a great interest in soil health from producers, ranchers, practitioners, and scientists. Soil health can be defined in various ways, but generally it is said to be the capacity of soil to sustain plants and animals over time. Soil functions are at the center of soil health and are divided into chemical, physical, and biological properties. Soil health is an excellent conversation starter and helps us understand the linkage between soil properties. Yet, soil health assessment uncertainties exist between soil types, climate, and cropping systems due to spatial and temporal differences. Further, there are discrepancies between agricultural and environmental soil functions. These agricultural and environmental needs often do not overlap. This symposium will bring together soil health experts from four US regions to discuss regional differences in soil health approaches for agricultural systems. Challenges, opportunities, and vision for future work will be discussed. This is a joint symposium with the Soil and Water Management and Conservation Division of the Soil Science Society of America, and will be also held during their 2022 Annual International Meeting.

Presentation 1: What Does Soil Health Mean in the Southern United States: Challenges and Opportunities – *Deanna Osmond, North Carolina State University; Sindhu Jagadamma, University of Tennessee*

Presentation 2: Soil Health Perspectives in Diverse, Western US Ecosystems – *Jim Ippolito, Colorado State University*

Presentation 3: Soil Health Up North: Assessing the Benefits – *Anna Cates, University of Minnesota; Hava Blair, University of Minnesota*

Presentation 4: Crop Residue Management and Nitrogen Fertilization Influences on Soil Health in the Semiarid Pacific Northwest – *Hero T. Gollany, USDA ARS*



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2022 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.



Ann Sorensen

As senior research advisor for American Farmland Trust, Ann Sorensen has contributed to the advancement of soil conservation and land protection, both through pioneering research and

transformative public policy. She has advanced the science, policy, and implementation of conservation through applied research, innovative pilot projects, farmer engagement, and science based advocacy. She understands the value of sound research in the public policy process, and her work has directly helped shape public policy at a level rare for researchers. Countless researchers have been influenced by her work and passion, and many USDA and Congressional staffers have been persuaded by her data and diplomacy. Sorensen has built upon Norm Berg and Hugh Hammond Bennett's soil conservation work by linking the land and the soil through farmland protection and soil health. She is a well-deserving recipient of the SWCS 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.



J. Arbuckle

J. Gordon Arbuckle Jr. is a professor and extension sociologist at Iowa State University. His research and extension efforts focus on drivers of farmer and agricultural stakeholder action, related

to soil and water quality. Arbuckle is nationally and internationally recognized for his efforts in conservation policy and sustainability of farming systems. His research and leadership on the Iowa Farm and Rural Life Poll has established this as the source of Iowa's foundational knowledge on farmer behavior and decision-making. His outreach is covered in local, state, and national press publications that are targeted to the public audience. Arbuckle has been a continuous and active member of SWCS since 2007, attending nearly all SWCS conferences since; serving on the Editorial Board of the Journal of Soil and Water Conservation; and serving as co-principal investigator and lead social scientist on SWCS's Conservation Practitioner Poll Project. He has earned multiple Journal of Soil and Water Conservation Best Research Paper Awards, as well as the Associate Editor Excellence Award. Arbuckle promotes the recognition of his graduate students and has been willing to share his expertise through a new initiative at Iowa State, a nine-month professional development training for conservationists. He has enriched the conservation field and serves as an example for all in leaving a legacy to shape a better future. His efforts are truly worthy of status as a Fellow of SWCS.



Mark Liebig

Mark Liebig is a research soil scientist with USDA ARS Northern Great Plains Research Laboratory. He is an outstanding example of life-long dedication to the service of natural resource management through his high-

quality, diverse, and revealing research program on soil quality, soil carbon storage, and greenhouse gas mitigation within semiarid agroecosystems. Liebig led the development of soil sampling, processing, and analysis guidelines for the national GRACEnet (Greenhouse Gas through Agricultural Carbon Enhancement Network) effort, co-led efforts to establish guidelines for the Long-Term Agroecosystem Research (LTAR) Network Croplands Common Experiment, and helped establish the international MAGGnet (Managing Agricultural Greenhouse Gases Network) within the Global

Research Alliance on Agricultural Greenhouse Gases (GRA). An SWCS member for 20+ years, he has served as a North Dakota SWCS Council representative, has given multiple presentations, moderated sessions at SWCS technical workshops, and has volunteered time to assist organizers of SWCS-sponsored workshops. Throughout his career, Liebig has sought to make his research efforts transferable to agricultural clientele, as shown through his research in developing and testing user-friendly approaches to assess soil properties, his contributions to develop decision-aids for designing more sustainable agroecosystems, and his work with national and international organizations to develop climate change mitigation strategies for agricultural producers. For his dedication to natural resource management, Mark Liebig is an outstanding selection for Fellow.



DeAnn Presley

DeAnn Presley is a professor in the Kansas State University Department of Agronomy. She is nationally and internationally known as an authority on soil and water conservation and management, having been an internationally invited speaker. Her integrated extension and

research program is based on applied field research on subjects including cover crops, soil health, wind erosion, and soil physical properties as a function of crop residue management strategies of Mollisols in Kansas. Her service to SWCS has included active membership since 1999, as well as chair or member of the SWCS Annual Conference Planning Committee since 2012, and regular reviewer of the Journal of Soil and Water Conservation. Presley is a dedicated educator, advisor, and mentor for numerous graduate and undergraduate students, and she has been honored for her excellence in teaching. Her extension work includes approximately 500 presentations to over 22,000 adults and 5,000 youth. DeAnn Presley truly exhibits the superior qualities that warrant her selection as a Fellow of SWCS.

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.



Conservation Agriculture Systems Innovation Center


The California's Conservation

Agriculture Systems Innovation (CASI) Center is being recognized for its long and commendable service fostering the science and art of natural resource conservation. CASI has had a remarkable impact on addressing important resource conservation challenges by using scientific principles and practices associated with reduced disturbance agricultural production systems that have had immense benefits in other regions, but that have been largely unexplored in California prior to its formation in 1998. Its work first investigated long-term impacts of reduced tillage and cover cropping on soil function, water and carbon cycling, and economics in a unique 22-year study on several farms in the San Joaquin Valley. New production paradigms for crops in a region that historically has relied on intensive disturbance during the past century were developed. As a result, less dust, positive changes in soil structure, porosity and hydraulic properties, and soil biological attributes was documented. More recently, CASI's work has been quantification of water use by winter cover crops; this effort may help inform and shape policy to implement the State's Sustainable Groundwater Management Act in several San Joaquin Valley counties. While focused largely on California, CASI has shared their work widely through invited presentations, videos, and web blogs. Because of their efforts in soil and water conservation, they are highly deserving of the 2022 Conservation Innovation Award.



Navigation-Ecosystem Sustainability Program

Waterways Council, Inc. is being recognized for the 2022 Conservation Innovation Award for the successful implementation of the Navigation-Ecosystem Sustainability Program (NESP) for the Upper



Mississippi River System (UMRS). Authorized in 2007, NESP is an innovative, transformative approach to address multiple challenges facing the UMRS. It is the only river system designated by Congress as a “nationally significant ecosystem and a nationally significant commercial navigation system.” NESP projects are focused on restoring, protecting, and enhancing riverine and riparian habitats through ecosystem restoration measures designed to ensure the sustainability of home to 25% of North America’s fish species and a globally important flyway to 40% of North America’s migratory waterfowl and shorebirds. The program, managed by the US Army Corps of Engineers, requires multiple federal and state agencies, along with nongovernment organizations, to collaboratively prioritize and shape the future of the UMRS. Paul Rohde deserves special recognition for his role in finding solutions that a diverse coalition can support. Through the NESP, there’s a spotlight on America’s greatest river and education for the public on the need for its restoration through workable solutions that benefit all citizens of its watershed, regardless of income, ethnicity, or other status. The efforts of Waterways Council, Inc. are most deserving of the 2022 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.



David Bedlan

The Harold and Kay Scholl Excellence Award goes to David Bedlan. Bedlan has been involved in multiple projects that advance community

involvement in natural resource management and agricultural land conservation. In 2011, he helped to convert 98 acres of farmland into a riverine wetland, which in turn protected the City of Fairbury’s drinking water wells and benefited local flora and fauna. He was also involved in improving erosion problems in the McNish City Park through the design of a grade stabilization project and the installation of 410 block chutes and a flexible mat

liner. Because of this project, soil erosion was reduced greatly and the overall aesthetics of the park were enhanced. Bedlan has a commitment to working with community members and land owners to preserve natural resources, reduce erosion, and promote the conservation initiatives championed by SWCS.

Conservation Professional of the Year Award

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



Steve Tucker

Steve Tucker is not “just a farmer.” He is a regenerative agricultural production specialist. He switched from conventional farming to no-till farming in 1994. In

2010 he added the use of cover crops, and in 2015 he added livestock. In 2016, the National Association of Conservation Districts (NACD) named him Soil Health Champion. This year he was invited to present at the Orlando NACD conference. His presentation was titled “Extreme Weather Events and Climate Change: How NACD and Local Landowners Are Making an Impact.” Tucker has been on the speaker’s list many times for NRCS’s Farming Evolution over the past seven years, an event that reaches 150 to 200 farmers each year from all over the country and Canada.

Society Service Award

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



Arlene Brandt-Jenson

Arlene Brandt-Jenson is recognized for her service to the Society as a leader and for her service to her chapter. With the South Dakota Chapter membership in decline, Brandt-Jenson saw a challenge and decided to do something about it.

While serving as chapter president and on a special chapter committee that revised and updated chapter

bylaws, she saw a way to utilize these new bylaws, and the committees it created. She engaged and reinvigorated the membership by involving members in the new committees and shaping goals for the chapter. Her relentless chapter outreach also included SWCS booths at several conferences and workshops, multiple events directed at student clubs, and phone calls to new employees coming into the natural resource field. In addition to organizing two virtual annual South Dakota Chapter meetings, she worked closely with outside groups and organizations such as South Dakota State University Extension, Blue Dasher Farm, South Dakota Department of Agriculture and Natural Resources, Ride Across South Dakota, and the City of Sioux Falls, utilizing their platforms to increase SWCS visibility and find potential partners for chapter activities. Her many efforts grew chapter membership by 40% during her presidency. Congratulations to Arlene Brandt-Jensen, recipient of the 2022 Society Service Award.



Edwin Harms

Edwin Harms is recognized with the Society Service Award for long outstanding service to his chapter. Harms has served in many capacities for the Nebraska Chapter, including secretary and president of the Nebraska Panhandle

chapter, prior to formation of the statewide Nebraska Chapter. Once the statewide chapter was formed, he served as the Nebraska president. He continues to serve as Nebraska Panhandle director. Harms's service to the organization comes in many different forms; however, most notable is his work to organize more than seven chapter annual meetings. Beyond this, he serves as vice-president of the Nebraska SWCS Foundation, which meets in conjunction with the chapter annual meeting. He promotes the scholarship program of the Foundation and the Nebraska Chapter and has served on the scholarship selection committee along with nominating worthy conservation contributors for the Nebraska chapter awards committee. Truly, Ed has made a consistent and steady contribution to the Nebraska SWCS Chapter through the years and has practiced the

principles of conservation in his time of public service and private life. Congratulations to Edwin Harms, recipient of the 2022 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.

Jill Stone



Jill Stone, senior director of global accounts with HelmsBriscoe, has been instrumental in assisting SWCS in finding, negotiating, and contracting our annual conference and special event facilities and hotels for over 15

years. In addition to behind-the-scenes work, she has assisted staff on-site during conferences, always prepared to jump in where needed. The success of many events throughout the years would not be possible without her, and her contribution to the Society is sincerely appreciated!

Naveen Adusumilli




Naveen Adusumilli has provided outstanding leadership and service as chair of the SWCS Science and Policy Committee from 2020 to 2022. He

led meetings with a high level of engagement that inspired other members to engage as well. He ably assisted committee members and SWCS staff with inviting speakers and provided pointed feedback and commentary on their presentations. He also grew the committee community by inviting others to attend and contribute. His leadership is a model that succeeding committee chairs can follow to achieve great success.

John Williams



John Williams has served as an associate editor of the Journal of Soil and Water Conservation for more than 20 years, and his efforts have helped shaped the journal into the publication it is today.



During his tenure, he has managed the review of over 100 manuscripts, assisted with special assignments, and served on the Editorial Policy Committee. His ongoing service in support of the SWCS mission to advance conservation knowledge has had a tremendous impact on the success of the journal, the Society, and the state of conservation research.

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.

Paul DeLaune



Paul DeLaune, professor at Texas A&M at Vernon, has conducted a range of research projects, including development of a phosphorus (P) index for pastures; work in a water quality impaired watershed that showed

that as much as 100% of cotton nitrogen requirements could be accounted for by crediting nitrate in the groundwater, which can reduce inputs; identification of improved timing for efficient irrigation; and study of cover crop seeding rates for beneficial soil function and crop response. DeLaune has garnered more than \$23.4 million in grant funds, which led to 51 peer-reviewed manuscripts, 58 proceeding papers, 205 scientific abstracts, 3 book chapters, and many other publications, articles, presentations, and webinars. His research excellence in the field of soil and water conservation makes him well-qualified for the SWCS Conservation Research Award.

Julie Peterson



Julie Peterson has built a robust and interconnected research-extension program focusing on the conservation of beneficial arthropods and management of pests in row crops, well supported by extramural funding and by team and interdisciplinary linkages within and beyond

the University of Nebraska–North Platte. She very effectively combines strong field ecology with traditional applied crop entomology and has established herself as a global authority on biological control and noctuid pests of row crops. Peterson has produced 25 journal papers, 1 book chapter, 60 extension products, 9 editor-reviewed articles, 5 statements on public policy, 54 invited presentations, 67 submitted presentations, 56 posters, organized 5 national and international symposia, and made 67 oral presentations to various audiences. Her research and extension excellence regarding pests and entomology in agriculture makes her well-qualified for the SWCS Conservation Research Award.

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

Prokopy, L.S., K. Floress, J.G. Arbuckle, S.P. Church, F.R. Eanes, Y. Gao, B.M. Gramig, P. Ranjan, and A.S. Singh. 2019. Adoption of agricultural conservation practices in the United States: Evidence from 35 years of quantitative literature. *Journal of Soil and Water Conservation* 74(5):520-534. <https://doi.org/10.2489/jswc.74.5.520>.

Best Research Paper for Impact and Quality Honorable Mention

Marcillo, G.S., and F.E. Miguez. 2017. Corn yield response to winter cover crops: An updated meta-analysis. *Journal of Soil and Water Conservation* 72(3):226-239. <https://doi.org/10.2489/jswc.72.3.226>.

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

Spratt, E., J. Jordan, J. Winsten, P. Huff, C. van Schaik, J. Grimsbo Jewett, M. Filbert, J. Luhman, E. Meier, and L. Paine. 2021. Accelerating regenerative grazing to tackle farm, environmental, and societal challenges in the upper Midwest. *Journal of Soil and Water Conservation* 76(1):15A-23A. <https://doi.org/10.2489/jswc.2021.1209A>.

Editor's Choice Honorable Mention

Amonette, J.E., H. Blanco-Canqui, C. Hassebrook, D.A. Laird, R. Lal, J. Lehmann, and D. Page-Dumroese. 2021. Integrated biochar research: A roadmap. *Journal of Soil and Water Conservation* 76(1):24A-29A. <https://doi.org/10.2489/jswc.2021.1115A>.

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.



Margaret Gitau

Margaret Gitau has served as an associate editor of the *Journal of Soil and Water Conservation* for 10 years, specializing in the areas of hydrology, water quality, and nutrient management. During this time, she has overseen the

review of dozens of manuscripts, providing authors with prompt and thorough feedback to improve their work. Her contributions to advance the journal and conservation science are recognized with the 2022 Associate Editor Excellence Award.



Gergely Jakab

Gergely Jakab joined the Editorial Board in 2017. In just five years, he has shown dedication to ensuring authors receive timely feedback through rapid reviewer assignment and review evaluation. In addition to excellent management of his assignments, Jakab has assisted

other associate editors by providing reviews when his expertise is needed. His efforts to ensure the quality

and reputation of the journal are recognized with the Associate Editor Excellence Award.



Lisa Lobry de Bruyn

Lisa Lobry de Bruyn has served as an associate editor for five years. In this role, she has earned recognition for the high quality of her reviews, both for her own assignments and in service

to other editors. She has managed review of 20 manuscripts, in topics including soil carbon, biochar amendment, irrigation practices, and soil restoration. Her work to improve the journal's impact is well-deserving of the Associate Editor Excellence Award.

CHAPTER AWARDS

Chapter Achievement Award

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

- Colorado Chapter
- Empire (New York) Chapter
- Hoosier (Indiana) Chapter
- Montana Chapter
- Virginia Chapter

Outstanding Chapter Award

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

- California/Nevada Chapter
- Firman E. Bear (New Jersey) Chapter
- Iowa Chapter
- Michigan Chapter
- Nebraska Chapter
- South Dakota Chapter
- Southern New England Chapter

SCHOLARSHIPS

Donald A. Williams Scholarship

Provides financial assistance to members of SWCS who are currently employed, but who wish to improve their technical or administrative competence in a conservation-related field through course work at an accredited college or through a program of special study.



Christopher Burch

Christopher Burch is the 2022 Donald A. Williams Conservation Scholarship award recipient. Chris is a student member of the SWCS and is currently pursuing a master's degree in environmental biology at Hood College located in

Frederick, Maryland. He is also a full time employee at the Maryland Department of Agriculture. In this role, Burch offers both technical and financial assistance to install conservation practices, which maximize production, while preventing costly nutrient and soil loss from contaminating local watersheds. His goal is to provide assistance to farmers while working to restore the Chesapeake Bay. Burch has a strong desire to be a life-long learner and is willing to share his knowledge with others so that they grow in knowledge as well. He is the quintessential example of a student who works hard, connects school with career goals, and believes enthusiastically in the value of his education. He is going back to school to continue teaching at Hagerstown Community College, where he was instrumental in helping to create their first environmental studies degree program. In addition to these accomplishments, Burch has received many awards and recognition of service to multiple organizations such as the FAA, Boy Scouts of America, Envirothon, and the Maryland Agriculture Teachers Association, to mention a few. With his exemplary work ethic, high standards of excellence, thirst for knowledge, and passionate dedication to the environment, in particular soil and water conservation, he is a deserving candidate of the Williams 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.



Tracy Rosenberg

Tracy Rosenberg is an educator and writer by profession, but in 2013 she became one of the largest female managers of virgin prairie on the Coteau des Prairie in Grant County in northeast South Dakota, and her passion for native

prairie ecosystems and education began. Since her journey in prairie restoration, she has been an active advocate in sharing her conservation message on the importance of native ecosystems and prairie restoration throughout the Northern Great Plains region with land managers, agency professionals, educators, farmers and ranchers, special interest groups, tribal members, and youth.

In 2021 Tracy set the wheels in motion to fulfill her next goal and vision of creating an interpretive trail on the Abbey Grasslands Prairie with a goal of reaching students, teachers, indigenous women, and new beginning farmers and ranchers. The trail will be ready for visitors in 2022, and Tracy has future plans for workshops, day events, and hosting a Prairie Ecology School.

Tracy Rosenberg has been pivotal in changing the management and restoring the native prairie of Abbey Grasslands Prairie. Tracy's goal has been to restore native remnant prairie but more importantly to educate others of the importance of ecosystem biodiversity and sustainability. She has been an outstanding spokesperson for natural resources conservation, sharing her story at speaking engagements and sharing her management and prairie with the public and conservation partners through tours. Since 2015 she has donated over 2,000 hours of public service to share her conservation message and the prairie she manages through tours and on-site visitors. Tracy exemplifies the word "conservationist" and is well deserving of the WiN Conservationist of the Year Award.

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.



Heather Medina Saucedo

Heather has been 100% committed to this position and has provided excellent leadership and guidance 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 Heather's year as the WiN President, member numbers went from 228 to 306, which is a huge accomplishment.

Serving as Past President during this past year with the COVID restrictions still in place, she has been very accommodating and attentive to the various WiN committees she has been advisory to. She does an excellent job of involving WiN members, identifying their areas of interest, and making direct contact with them to get them actively involved in activities and committees.

Heather's work with the WiN Strategic Plan ensured that a new plan was in place at the expiration of the 2015–2020 WiN Strategic Plan. She organized a committee and led the charge to establish a document that has clear goals and objectives. Our 2021–2026 WiN Strategic Plan was put in place in early 2021 due to Heather's diligence and excellent leadership and guidance.

Heather further highlighted her executive prowess while developing an annual WiN Business Plan to implement WiN's Bylaws, Policy, and strategic plan. She was adamant that there needed to be something to follow. WiN's first WiN Business Plan was developed in 2021, and it has provided excellent guidance and accountability to the WiN National Council. The Business Plan is updated monthly to determine what is being accomplished and what items need further attention.

Heather was involved in WiN's sponsorship of the SWCS Conference in 2020 and in 2021 and is chairing the committee for WiN's sponsorship at the 2022

National SWCS Conference. She provides excellent guidance and leadership to accomplish all the tasks that are required to be a part of this great event.

Overcoming the challenges of work-life balance and going further to selflessly volunteer her time and remarkable talents to WiN makes her the ideal representative for WiN to recognize and celebrate.

Thank you, Heather, for your commitment and dedication to Women in 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.



Kathy Ferge

Kathy began her position as Oregon's NRCS Tribal Liaison 10 years ago. She took her duties to heart. She attended the Intertribal Agriculture Council (IAC) National meeting and connected with the NW

IAC technical assistance specialist. As a result, the IAC NW specialist and Kathy had onsite meetings with the nine Tribes of Oregon, spending a week creating the network she presently has at her fingertips.

Kathy goes above and beyond the call of her duty. Kathy has created the Oregon Tribal Advisory Committee where NRCS shares and discusses tribal priorities. Kathy has coordinated various state trainings known as Working Effectively with Tribes in Oregon. Staff have commended her for her work putting these on in coordination with the tribes.

Kathy Ferge has served as the State Outreach coordinator/Tribal Liaison for the 10 past years for Oregon NRCS. Kathy has taught an Extending Outreach class (part of the NRCS Communication Course team). On the Oregon facilitation cadre, she has worked on built relationships in various counties.

Kathy is also active in her roles as the beginning farmer coordinator for Oregon and has actively

served as on the Oregon Civil Rights Committee for more than 11 years as an advisor and has been informally mentoring employees. Additionally, she served as an RC and D Coordinator in Eastern Oregon.

Kathy served as the lead POC for updating of the WiN strategic plan. This was a major lift and involved numerous levels of WiN leadership and WiN members. Her involvement in this process enabled WiN to set the course for future interaction.

Beyond the workplace, Kathy supports and furthers her passion for outreach in her eastern Oregon community through 4-H, her church, and many other local organizations. She is also actively involved in a cow calf operation with her husband Lloyd. Kathy's wholesome devotion to conservation makes her truly worthy of this recognition.

WiN Group Award of Excellence Recipient

In recognition of a group who, over a period of time, have 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.



Handling Uncomfortable Situations - Personal Safety for Field Staff - Trainers

Both Jenny Templeton and Allison Hammer are field staff at NRCS in Virginia. Jenny is the District Conservationist

for the Eastern Shore and Alli is the Resource Soil Scientist for Area 4 on the coastal plain of VA. Both have been providing training to staff at their "Joint Employee Development" (JED) trainings from time to time over the last several years. On December 3, 2021, they presented their popular training about personal safety to a group of nearly 50 Southeast Region WiN participants and led them through a discussion of responding safely to uncomfortable situations on the job and in the field. Participants were divided into smaller groups to role play and respond with examples of actual cases from others throughout the agency.

The training was so well received other states and groups reached out to them to present at other events, venues and meetings including our own In It to Win It!! The conversation and opportunity for sharing these trainings provided to staff was amazing and very much appreciated. We truly appreciate these two women and the impact their creativity, insight, dedication, and "heart" for other field staff has had on and for conservationists across the country.



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SWCS CONFERENCE SITES and CHAIRS

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