USDA Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Minnesota NRCS State Technical Advisory Committee (STAC) Meeting Notes

May 6-7, 2025

Waite Park, MN

Welcome and Introductions

- Minnesota NRCS State Conservationist Troy Daniell started the meeting off by welcoming attendees and emphasized their importance to NRCS carrying out its mission.
- Ryan Galbreath explained the purpose of the State Technical Advisory Committee and reminded attendees of the STAC Website, and the notes, operating procedures, and archived documents available there.
  - Emphasized the committee as advisory and informal. From time-to-time NRCS may poll participants but never call for votes. Committee purpose
  - Discussed the subcommittees that are active, and the forthcoming outcomes subcommittee. All are invited to participate in one or more of them.
  - Subcommittees with Tribal and urban & small-scale agriculture emphases may be added.

Voice of Milk

- Lucas Sjostrom of Minnesota Milk Producers Association spoke about current projects, and the state of the milk industry in Minnesota. Planning for the next generation of dairy farmers is very important to go forward.
  - Dairy heifer inventory is up 3% in Minnesota, but the national trend is down to a level not seen since 1978 at 3.91 million. Some reasons for this were discussed.
  - Improvements in genetics and nutrition have increased average milkfat and protein percentages. This supports cheese and butter production and sustainability.
  - H5N1, avian influenza, has negatively affected some dairy cattle in Minnesota since June 2024.
  - Minnesota Milk Climate Smart Program is currently enrolling participants. The project seeks to improve environmental sustainability, and to provide financial support to farmers for producing low carbon intensity (CI) milk.
  - Consider the value of manure. It is not “waste.”
  - More information: Lucas Sjostrom, **lucas@mnmilk.org**, **Presentation slides**

NutraDrip Irrigation Systems

- Taylor Zeltwanger, NutraDrip representative, introduced the subsurface drip irrigation system concept. His presentation covered the history of the family-owned company, processes, benefits, and results of the system.
  - The system’s benefits include improved efficiency and sustainability, and return on investment (ROI):
    - Uses less water, 20%-50% compared to pivot irrigation, by eliminating evaporation, erosion and run-off, and delivering the water into the root zone with precision control and uniformity.
    - Reduces weed growth and uses less herbicide.
    - Apply fertilizer, including manure effluent, and other chemicals at the right time, right placement, right amount, and right source.
    - Irrigates any field shape and soil type.
    - Decreases Greenhouse Gas emissions; studies have shown 70% - 90% reductions.
  - Systems require maintenance and possibly interventions for rodents and water quality.
  - More information: Taylor Zeltwanger, **taylor@nutradrip.com**, **Presentation slides**

Minnesota Ag in the Classroom (MAITC)

- MAITC Executive Director Ann Marie Ward presented an overview of how the organization works to educate students in grades K-12 about agriculture. The mission is to increase agriculture literacy so students can better understand and communicate how agriculture affects their lives. Achieving the mission involves K-12 educator opportunities, curricular resources, and student engagement.
  - Professional development of educators offered through summer teacher tours, workshops and webinars, grants, and access to other teacher resources and materials.
    - There are 12 summer tours planned for this year.
    - Development may lead to participation in the educator advisory team.
  - Comprehensive curriculum is designed and crafted to meet academic standards and to highlight the critical role of agriculture in the students' lives (e.g. food and clothes).
    - Seasonal agricultural topics included in curricular resources.
    - Curriculum Matrix, searchable database for 400+ relevant lessons and activities.
    - Food for Thought connects Minnesota geography with agriculture.
    - May be infused into subjects such as science, social studies, English, and language arts.
  - Student engagement seeks to provide students and teachers with a comprehensive understanding of agriculture, and how it is locally and globally relevant. A variety of resources are offered. They include AgMag, virtual field trips, and farm camp.
    - Minnesota AgMag is published 14 times a year and is agriculture- & grade-specific (K-6th grade) It is provided free in print and online versions to Minnesota schools.
    - In virtual tours, farms and local agricultural facilities and businesses are brought into the classrooms. The tours target K-5th grade, offered 3 times a year, and have an impact on nearly 480 classrooms.
    - Farm camp takes the classroom to the farms and local agricultural facilities and businesses. Camp targets 5th – 12th grade students and will involve an estimated 1250 students this year.
  - More information: Ann Marie Ward, **annmarie@maitc.org**, **Presentation slides**

Wings Over Working Lands

- Sarah Hewitt, Senior Conservation Manager with Audubon Upper Mississippi River (UMR), explained how Audubon is working to reverse declining bird populations through the Healthy Forests and Wings Over Working Lands Initiatives. Two programs are designed to target the major causes of population decline: Habitat loss and degradation.
  - The Bird-Friendly Maple Program supports maple syrup producers who are committed to managing their sugarbush (forest stand from which maple sap is harvested). Education and technical support will be offered. Producers enroll voluntarily by agreeing to implement practices to improve habitat for birds as well as overall forest health. They earn Audubon's public recognition and can put the Scarlet Tanager "Seal of Approval" on their products.
    - In the last 50 years, forest-dependent bird populations have decreased by more than 25%. Examples include Black-Throated Blue Warbler, Golden-winged Warbler, Scarlet Tanager, and Ruffed Grouse.
    - Forests that are great places for birds are likely to have better long-term sap production, fewer forest health problems, and better able to adapt to climate change.
    - Audubon's Forest Management Guides provide information on target species, their habitat requirements, and suggested silviculture practices.

- Audubon Conservation Ranching (ACR) is a voluntary, incentive-based certification program that partners with land stewards and beef & bison grazers to stabilize declining bird populations on privately owned grasslands. This program is a market-based conservation solution that connects conservation conscious consumers to products that were grown or created with environmental standards. ACR Ranchers work with grassland ecologists to develop habitat management plans built on the 3 pillars of habitat management, animal health and welfare, and environmental sustainability, and must use regenerative grazing.
  - Grassland birds have suffered the greatest population decline – about 53% since 1970.
  - Technical and financial assistance is available until 2028 through a Conservation Innovation Grant.
  - Participating farms are eligible for Bird Occupancy Payments. The payments are based on the presence of target bird species, determined by bird monitoring conducted by Audubon.
- More information: Sarah Hewitt, **sarah.hewitt@audubon.org**, **Presentation slides**

Minnesota Turkey

- An overview of Minnesota's turkey industry was presented by Ashley Kohls of the Minnesota Turkey Growers Association (MTGA). The presentation included a production overview, industry and Association overview, and notable issues.
  - From the hen laying an egg, which incubates for 25 days and 3 more to hatch out, to loading out as finished ~20-21 weeks later, the turkey production cycle is a continuous process.
  - MTGA, a non-profit service organization, closely monitors and updates members on industry trends, news, and advancements. This puts the organization in a position to address the changing needs of turkey farmers and the industry. To ensure the needs of turkey growers are met, MTGA communicates with Minnesota Turkey Research Promotion Council (MTRPC).
    - Advocates for turkey industry to policy makers, plans educational events, engages in workforce development, outreach, and emergency response.
    - Supports a turkey industry that is ranked #1 in the nation producing ~40 million turkeys, which is about 18% of all the turkeys in the entire nation.
  - Notable issues include Avian Metapneumovirus (aMPV) and Highly Pathogenic Avian Influenza (HPAI). Significant losses may be realized, including depopulation. Treatments and emotional issues are important considerations.
    - Information and assistance are provided: www.usda.gov/avian_influenza/.html and www.aphis.usda.gov/fadprep.
    - Innovations such as green lasers for bird deterrence are being explored.
  - More information: Ashley Kohls, **akohls@minnesotaturkey.com**, **Presentation slides**

Ecosystems Marketing

- Peter Mead from The Nature Conservancy introduced the Minnesota Ecosystem Service Market pilot project. The project is developed with the Ecosystem Services Market Consortium (ESMC). Several partners are actively involved implementing or funding the pilot project. Several advocates are involved in providing advice, advocacy of the approach, and/or listed as a supporter in outreach materials.
  - The pilot provides financial incentives to encourage more farmers to implement practices that help improve soil health, reduce greenhouse gas production (or sequester carbon in the soil), and reduce nutrient run-off from farm fields.

- Seeks to partner with farmers, agricultural businesses and other stakeholders to test ESMC's market protocols on 50,000 acres that have corn and soybean cropping systems with a heavy dairy or livestock component.
  - Pathways to adopt practices include farmer awareness, financial & risk incentives, technical & operational capacity, and farmer buy-in.
  - Desired outcomes include improved profitability and resilience, improved water quality, and reduced GHGs.
  - Goals involve implementation efficiencies and economic drivers.
- Eligible conservation practices include Cover Crop (340), Prescribed Grazing (528), Nutrient Management (590), and Residue and Tillage Management, Reduced Tillage (345), to name a few.
- Among the greatest challenges presented include harder than anticipated farmer enrollment, farm data is time consuming, and lack of stability in carbon markets rules.
- More information: Peter Mead, **peter.mead@tnc.org**, **Presentation slides**

Minnesota Forest Resources Council

- Jaimé Thibodeaux, Landscape Program Coordinator from the Minnesota DNR presented an overview of the purpose and work of the Minnesota Forest Resources Council (MFRC). The organization grew out of the 1994 release of a Generic Environmental Impact Statement on timber harvesting and forest management. It was established by the Sustainable Forest Resources Act of 1995 (reauthorized in 2023) to create sustainable forest management programs and tools (e.g., forest management guidelines, resource plans, and research) for the purpose of being stewards of Minnesota's 17 million acres of forests.
  - MFRC is comprised of 17 appointees who represent broad forest interests and develop recommendations for policies, resolutions, and programs. The council is designed to balance economic, ecological, and social sustainability. The council meets quarterly.
    - The council engages with stakeholders on the federal, state, county, and local government levels. Policy priorities are developed.
    - Initiate forest resources research; the research is shared, assessed, and discussed.
  - Forest disturbances associated with climate change have been identified and are trending upwards. They include insects, disease, wind, and fire, to name a few.
  - Ultimately, the objective is managing forests to remain vigorous resilient, adaptable to climate change, and to keep forested lands forested.
  - More information: Jaimé Thibodeaux, **jaime.thibodeaux@state.mn.us**, **Presentation slides**

Biochar Pilot Project

- Katie Fernholz from Dovetail Partners presented an overview of and information about the Carlton County biochar pilot project. The objective of the project is to determine if biochar, a product made using low quality, high quantity woody biomass, can be an efficient woody vegetation management strategy, producing a useful end product that can do great things in some scenarios for soil health. Woody biomass can be from such things as infected Ash trees and Buck Thorne control.
  - Document effects of biochar applications on soil health parameters in varied soil types and cropping systems, using MN NRCS Soil Carbon Amendment, conservation practice 336.
  - Project uses 6 application plots and monitors the soil health impacts. Some were sandy sites, clay soil sites, and at least 1 row crop, hay field, and pasture.
  - Applications completed with common and accessible equipment following the 336 practice standards.

- Conduct biochar making demonstrations with small scale equipment to compare characteristics with biochar produced commercially.
- More information: Katie Fernholz, **katie@dovetailinc.org**, **Presentation slides**

NRCS Programs Report

- NRCS program updates were presented by Keith Kloubec, Michelle Legatt (Regional Conservation Partnership Program (RCPP) Coordinator), and Kaitlyn Miller (Agriculture Conservation Easement Program (ACEP) Easement Program Manager). The discussion included FY25 Program updates, and Local Work Group opportunities.
  - The programs update can be reduced to 3 categories: The good, the bad, and the ugly.
    - The good: Interest in conservation is high; most customers value Minnesota's conservation work; benefits from good funding, state/local support & partnerships.
    - The bad (uncertain): The Executive Order signed 2/26/2025, paused Inflation Reduction Act (IRA) funding. Funding for previously obligated contracts has since been lifted. New obligations are still paused.
    - The ugly: Opportunities rely on adequate staffing for the number of contracts. MN NRCS staffing is currently in steep decline. This results in steep increases in workload. Since conservation needs are not changing, how they are addressed will need to be.
  - Partnerships for Climate Smart Commodities is being renamed Advancing Markets for Producers (AMP) and will be reevaluated.
  - CSP highlights include historic funding with a downward funding trend currently due to IRA funding being paused. CSP renewal updates and progress on CSP Classic obligations were shared.
  - EQIP funding history was shared. It has declined recently with IRA funding pause. Applications and funding numbers for 2025 were discussed. Data on national initiatives and goals were presented. MN NRCS is on track to meet obligating goals for beginning farmer/rancher, socially disadvantaged, livestock and wildlife focus areas.
  - Regional Conservation Partnership Program updates were provided with information for several projects in Minnesota. Some projects like the American Bird Conservancy Improving Forest Health for Wildlife Resources have large project areas. This one includes 20 counties in the project area. Minnesota is also involved in multi-state projects. For the next year's proposals, projects will need prioritization where partners will deliver much or all the technical assistance.
  - ACEP funds allocations data were discussed. ACEP IRA funding may get released but will be challenging to complete required due diligence if they are. There are 1,125 existing easements in Minnesota and include 133,600 acres. Each must be monitored every year. Onsite monitoring is completed for 25-50% of them. For FY25, since there are only 3 field staff (one part time) remaining, partners will assist by completing 175 of the site visits.
  - There was discussion on the FY25 Local Working Groups (LWG) and farm bill updates.
  - More information: Keith Kloubec, **keith.kloubec@usda.gov**, **Presentation slides**

Minnesota Corn's Sustainability Journey

- Adam Birr, Executive Director of Minnesota Corn Growers Association (MCGA)**,** presented Minnesota Corn's three-pronged approach to sustainability. Farming in a manner that meets the needs of the present without compromising the ability of future generations to meet their own needs involves people, planet, and profit. Sustainability requires much advocacy, which constitutes the majority of MCGA's budget.
  - Strengthening rural communities while enabling a safe and healthy quality of life and ensuring food security for all is driven by people – member and consumer engagement.

- Sustainability requires profitability. Farmers need a fair margin of profit, while delivering equitably priced goods to the non-farming public. Farm debt & income trends data were shared, as well as average costs and breakeven data. Low profitability is driving off-farm income.
- Sustainability requires responsibly managing the planet. Replenishing finite resources used for farming, while protecting and enhancing the environment that is impacted by farming practices. There are several elements involved in the sustainability of the planet.
    - Research focuses on nitrogen management, soil health and cover crops, and nutrient management.
    - Outreach is supported by extension positions. Fundamentals and advanced training courses are offered to help producers maximize economic return on nitrogen while minimizing nitrogen losses.
    - New acres of best management plans (BMP) are completed each year through state and federal government programs. BMPs are related to living cover, crop erosion control, drainage water retention and treatment, and nutrient management, to name a few.
    - On-farm assessments look at soil health, water quality, economics, carbon sequestration & GHG emission, edge-of-field conservation practices, corn nitrogen timing & rate, cover crops, and crop diversity.
- More information: Adam Birr, Ph.D., **abirr@mncorn.org**, **Presentation slides**

Ecological Science (ECS) Updates

- State Resource Conservationist Ryan Galbreath presented an update for ECS. The responsibilities and people within ECS were introduced. ECS is responsible for conservation practice standards, conservation planner certification, technical service provider training, and the Field Office Technical Guide (FOTG), to name a few. The people include State Agronomist, Water Quality Specialist, Grazing Specialist, State Cultural Resources Specialists, Economist, and State GIS Specialist/Business Tool, to name a few.
    - Project leads have requested the continuation of 2 Mississippi River Basin Initiative (MRBI) projects (Backes Lake and Lower St. Croix) and 2 National Water Quality Initiative (NWQI) projects (Doran Creek and Upper South Branch Buffalo River) in Minnesota. If approved for funding, all projects will continue as originally planned except for Backes Lake, for which the project lead is requesting approximately $1.5 million more than originally planned to fund additional contracts. MRBI and NWQI are both partner-led initiatives and have funds available for both planning and implementation phases. Anyone interested in these initiatives, contact Courtney Cheever, courtney.cheever@usda.gov.
    - The Technical Service Provider (TSP) program is available to help connect producers with ag professionals who can help plan, design, implement, and certify practices in the producer's NRCS contract. The application process to become a certified TSP is free. If anyone has any questions, comments, or would like to learn more about becoming a certified TSP, they can contact Courtney Cheever.
    - There was discussion about the FOTG. Some of the most used documents and total number of downloads from FOTG were included.
    - Updates to Conservation Practices were provided.
    - ECS is launching the new STAC Outcomes Subcommittee soon. The subcommittee will meet quarterly, present NRCS outcomes projects underway, refine objectives, gather input, and identify priorities for future presentations and collaborations. If interested, contact Sam Porter, samuel.porter@usda.gov.
    - More information: Ryan Galbreath, **ryan.galbreath@usda.gov**, **Presentation slides**

Agronomy Update

- Ryan Buetow, State Agronomist, presented a summary of some of the projects he and a few partners are undertaking.
  - Working, along with the State Soil Health Specialist, with the Midwest Cover Crop Council, industry and university experts to update the cover crop selection tool.
  - Updating the Agronomy Tech Note 33. Doing so will take into account updates made to the cover crop selection tool.
  - The Cover Crop conservation practice standard (Code 340) has some minor changes that have already been considered in the Tech Note 33 revision.
  - Multiple 590 Nutrient Management conservation practice trainings were offered throughout the winter and early spring.
  - More information: **ryan.buetow@usda.gov**

Subcommittee Reports

- The Watershed Subcommittee report was presented by Ryan Galbreath for Water Quality Specialist Courtney Cheever. Subcommittee purposes, partner collaboration, and common activities were discussed.
  - Provides the opportunity to share projects, tools, resources, and funding availability for projects across the state.
  - Reviews NRCS practice standard updates when water quality criteria will be affected.
  - More participants are invited to attend, present, and to provide guest speakers and topic ideas.
  - More information: Courtney Cheever, **courtney.cheever@usda.gov**, **Presentation Slides**

- The Grazing Subcommittee report was presented by Grazing Specialist Jeff Duchene. The general format of each meeting was discussed. The June 2025 meeting will include a presentation by Karl Hakanson about the Conservation Technology Innovation Center.
  - Data was presented on the FY2024 EQIP allocations for grazing-related conservation practices. Conservation practice 382, Fence, had the highest obligation at just over $4 Million.
  - Grazing-related conservation practices for the CSP program involved nearly 200,000 acres. Prescribed Grazing conservation practice was the most used for FY2024. The top 10 grazing-related practices for CSP obligated more than $660,000.
  - Interim conservation practice 827, Strategic Harvested Forage Management will be uploaded to the FOTG soon. Technical problems with the website have prevented the finalization of the planning worksheet since September 2024.
  - Changes to other conservation practices were discussed. Species eligible for 3 treatments have been added to conservation practices Brush Management (314) and Herbaceous Weed Treatment (315). NRCS will consider recommendations for additional species eligible for these practices.
  - More information: Jeff Duchene, **jeff.duchene@usda.gov**, **Presentation slides**

- The Wildlife Subcommittee does not have a meeting scheduled. The MN NRCS State Wildlife Biologist position is currently vacant.

Closing Comments

Minnesota State Conservationist Troy Daniell gave some closing remarks to bring the meeting to a conclusion. He expressed his gratitude to meeting organizers, presenters, and attendees. He encouraged all to continue the great conservation work. Finally, he hinted at having someone in the Tribal Community on the agenda for the next STAC meeting.