BOARD OF WATER AND SOIL RESOURCES

Soil Health Activities Report

2024-2025 Expenditure Report to the Legislature
1/15/2026

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Legislative Report Overview

This report has been prepared by the Minnesota Board of Water and Soil Resources (BWSR) in fulfillment of the requirements of Laws of Minnesota 2024, Regular Session, Chapter 116, Article 4, Section 7. This requires BWSR to "submit a report to the chairs and ranking minority members of the legislative committees with jurisdiction over environmental and natural resources on the expenditure of money appropriated for soil health activities under Laws of Minnesota 2023, Chapter 60, Article 1, Section 4, Paragraph (k)." This report outlines BWSR's comprehensive strategy to implement the Fiscal Year (FY) 2023-2024 General Fund appropriations.

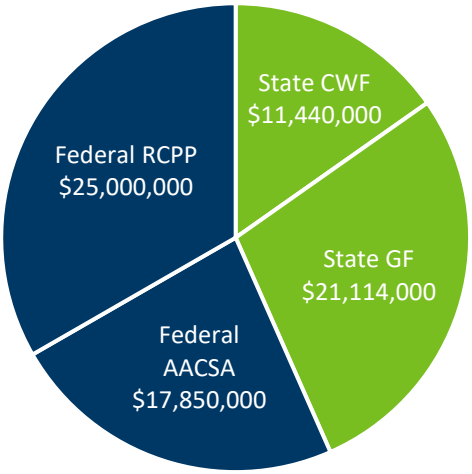
The Legislature appropriated $21.114 million from the General Fund (Laws of Minnesota 2023, Chapter 60, Article 1, Section 4, Paragraph k) to BWSR for soil health activities to achieve water quality, soil productivity, climate change resiliency, or carbon sequestration benefits consistent with Minnesota Statutes, section 103F.06. This is a onetime appropriation and is available until June 30, 2027. The BWSR Board may use grants to local governments, including soil and water conservation districts (SWCDs), and agreements with the United States Department of Agriculture (USDA); the University of Minnesota, Office for Soil Health; AgCentric, Minnesota State Northern Center of Excellence; and other practitioners and partners to accomplish this work.

Activity	Funding Amount	Summary
Advancing Soil Health in Minnesota Agriculture Project	$17,603,726	Increase trusted, on-the-ground soil health expertise needed to accelerate soil health and water quality improvements across Minnesota.
Virgina Tech Alliance to Advance Climate-Smart Agriculture	$2,799,033	Financial incentive program providing producer payments to implement climate-smart practices that include soil health.
Minnesota Office for Soil Health	$150,000	Statewide farmer survey to gather baseline data on producer knowledge, attitudes, and practice adoption.
Grant Administration & Regional Operations	$561,241	Grant management and oversight.
Total	$21,114,000	Total General Fund appropriation.

Leveraging Federal Resources

BWSR has maximized state resources by using $32.55 million in Clean Water Fund and General Funds to leverage $42.85 million of federal support for statewide soil health initiatives. This leveraged funding comes from two major 2023 achievements: a $25 million grant from the Natural Resource Conservation Service's (NRCS) Regional Conservation Partnership Program (RCPP) and $17.85 million secured by joining the multi-state Alliance to Advance Climate-Smart Agriculture (AACSA). Additional details on these programs can be found on pages 10 and 13 of this report, respectively.

Overview of Federal and State Soil Health Funding



Healthy Soil: Minnesota's Foundational Investment

Healthy soil is the cornerstone of agricultural livelihoods and is essential to making Minnesota landscapes resilient to our changing climate. More than just dirt, soil is a complex and dynamic living ecosystem — a delicate balance of minerals, air, water, and a vast array of organisms. The health of this ecosystem is directly linked to the productivity of our farms, the quality of our water, and the resilience of our communities in the face of climatic extremes.

Defining Our Common Ground

Soil health is the continued capacity of soil to function as a vital, living ecosystem that sustains plants, animals, and humans. This functionality is reflected in the soil's balanced biological, chemical, and physical properties, which are directly influenced by how the land is managed.

The Minnesota Office for Soil Health (MOSH) emphasizes a handful of key principles for building and maintaining this vital ecosystem: keeping the soil covered, minimizing physical and chemical disturbances, maintaining living roots in the ground year-round, diversifying crop rotations, and integrating livestock onto the land. Adhering to these principles protects our topsoil from wind and water erosion, while also feeding the intricate web of life beneath the surface. This subterranean activity, in turn, improves soil structure, allowing the land to better absorb precipitation — a critical function for mitigating both drought and flood risks across the state.

Common Soil Health Management Practices

The local efforts detailed throughout this report focus on implementing a suite of practices that adhere to the five soil health core principles, including:

Cover Crops

Planting crops (like cereal rye, clover, or oats) between cash crops to ensure the soil is covered and protected year-round, providing a continuous living root system.

(Photo Credit: Ann Wessel, BWSR)

No-Till and Strip-Till

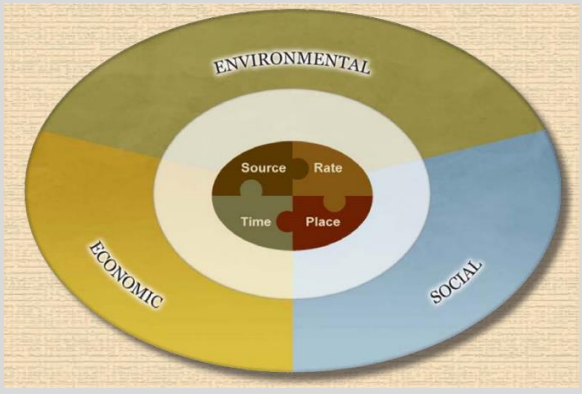
Conservation tillage methods that minimize mechanical disturbance of the soil to preserve structure, reduce erosion, and maintain organic matter.

(Photo Credit: Ann Wessel, BWSR)

Nutrient Management

Applying the "4R" principles (Right Source, Right Rate, Right Time, and Right Place) to fertilizers and manure, which optimizes nutrient use by crops and minimizes losses to air and water resources.

(Visual Credit: NRCS)



Rotational and Prescribed Grazing

Strategically adapting livestock grazing management to regulate vegetation use in a way that conserves soil health, water quality, and habitat integrity, and strengthens the vigor and productivity of forage resources by maximizing plant and root growth, encouraging plant diversity, and cycling nutrients back into the soil.

(Photo Credit: Fillmore SWCD)

Telling the Story: Local Leadership in Action

Implementing soil health practices is not new; it is a farmer-led movement with a deep history in Minnesota, championed for years by dedicated farmers, farm groups, and local conservation partners. Crucially, private soil health entities and farmer-led groups are highly instrumental in advancing practice adoption by focusing on peer-to-peer education, customized technical guidance, and direct financial incentives. The Minnesota Soil Health Coalition, a key farmer-led organization, provides farmer-to-farmer mentoring and networking, allowing producers to share firsthand experience and practical, agronomic solutions for practices like cover crops and no-till. Similarly, groups like the Land Stewardship Project (LSP) provide leadership through initiatives such as the Soil Builders' Network, which actively organizes field days, workshops, and on-farm demonstrations to connect farmers and disseminate emerging research. Furthermore, national and private-sector partnerships, such as the Farmers for Soil Health initiative — backed by commodity groups — offer cover crop incentive payments and one-on-one "cover crop coaching" to overcome adoption barriers related to equipment and management. These diverse private efforts effectively complement public programs by providing accessible, experience-based support, and financial resources.

SWCDs are the indispensable local agents of change, ensuring soil health solutions are tailored to local conditions. The following examples demonstrate the leadership provided by SWCDs.

Gathering and Sharing Knowledge

Mower SWCD and Olmsted County SWCD have been promoting soil health by gathering region-specific data on cover crops to help local farmers make informed decisions.

More Information: Snapshot Story

Bringing Farmers to the Table

Faribault SWCD has brought farmers to the table by prioritizing a farmer-led approach for education and outreach, where local farmers and landowners request events and choose speakers and topics.

More Information: Snapshot Story

Providing Resources

Clearwater SWCD rents out soil health equipment to producers that otherwise would not have access to equipment. They have a no-till drill that minimally disturbs the soil during planting and a soil aerator that helps reduce compaction in areas disturbed by heavy equipment.

More Information: Snapshot Story

Program Flexibility

By leveraging over $1.45 million in private funding, Wilkin SWCD established a flexible incentive program that allows producers to implement soil health practices using locally adapted standards.

More Information: Snapshot Story

Targeting Critical Resource Concerns

SWCDs align soil health directly with public benefits. For example, the Goodhue SWCD used a competitive BWSR Clean Water Fund grant to incentivize conservation practices that reduce nitrate leaching into the municipal drinking water supply, demonstrating how upstream land use directly safeguards downstream public health.

More Information: Snapshot Story

Program Innovation

Olmsted County SWCD is pioneering a streamlined model for soil health and ground water protection that minimizes administrative barriers. Their approach, which features a mobile-friendly platform for in-field enrollment and encourages flexible implementation, is currently being reviewed by the Minnesota Office for Soil Health. This initiative has prompted BWSR to evaluate the feasibility of adopting a statewide cover crop practice standard.

More Information: Olmsted County Soil Health

This long-standing, locally driven work is now strongly supported by the State of Minnesota through BWSR and Clean Water Fund investments, which provide technical capacity and large-scale implementation grants.

Strengthening the Foundation: Equipment Financial Support

Complementing the "boots on the ground" leadership of SWCDs and farmer groups, the State of Minnesota provides financial infrastructure through the Minnesota Department of Agriculture (MDA). The Agricultural Best Management Practices (BMP) Loan Program offers low-interest financing to help producers manage the financial risks associated with adopting new systems, often funding the purchase of high-values conservation equipment like no-till drills.

No-till drill used for seeding crops into minimally disturbed soils. Photo Credit: Ann Wessel, BWSR)

To further address equipment barriers, the MDA's Soil Health Financial Assistance Program (SHFAP) provides competitive grants

rather than loans. This program offers cost-share assistance for purchasing or retrofitting soil health machinery, significantly lowering the barrier to entry for both individual producers and local government units looking to expand access to these tools.

Together, these financial instruments ensure that local motivation is matched by physical capacity. This investment in on-farm infrastructure creates a solid foundation for the unified statewide strategy outlined in the Minnesota Soil Health Action Framework.

The Minnesota Soil Health Action Framework: Unifying Our Efforts

Putting soil health principles into widespread practice demands a coordinated statewide strategy to overcome systemic hurdles in agronomics, markets, learning networks, and technology. This strategy is formalized in the Minnesota Soil Health Action Framework, which represents a pivotal, collaborative effort facilitated by the MOSH and BWSR.

Developed in consultation with farmer organizations, food companies, co-ops, state and federal agencies, and environmental advocates, the Minnesota Soil Health Action Framework is intended to guide diverse interests in advancing soil health. It identifies key priorities that must be addressed to translate local success into statewide reality:

- **Invest in people, not just practices** by retaining and training the dedicated technical staff at the local level.
- **Support and increase farmer mentorship and peer-to-peer learning** to spread successful, site-specific knowledge.
- **Expand public-private partnerships** to leverage private capital and expertise alongside public funding.
- **Develop markets and supply chains** for emerging and soil-friendly crops to ensure profitability.
- **Increase funding flexibility** to better meet diverse farmer needs and encourage small-scale experimentation.

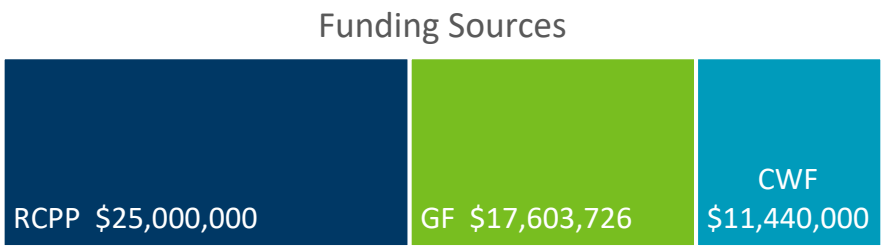
The Minnesota Soil Health Action Framework recognizes that lasting progress requires tackling these interdependent barriers simultaneously. It provides the essential blueprint for a unified, measurable path forward.

Minnesota stands at an inflection point. By continuing to strategically fund our local partners, we solidify the gains made, secure our natural resources for future generations, and demonstrate the powerful return on investment that coordinated, science-based conservation provides. This continued support is not merely maintenance; it is the crucial step required to translate the vision of the Minnesota Soil Health Action Framework into an enduring reality across the entire state.

Advancing Soil Health in Minnesota Agriculture

In 2024, BWSR in partnership with the Natural Resources Conservation Service (NRCS) and local SWCDs, launched the Advancing Soil Health in Minnesota Agriculture project. This initiative is a direct and targeted response to the Minnesota Soil Health Action Framework, which identified a primary barrier to widespread soil health practice adoption: a lack of local, trusted expertise.

The project represents a $54 million investment (combined state and federal funds) and a strategic shift to implement the framework's top recommendation: "Invest in people, not just practices." The project's structure signals a deliberate move to fund farmer mentors and staff to accelerate progress on state goals by using its $29 million state contribution for vital technical assistance, outreach, and project implementation. This allows the $25 million in federally leveraged Regional Conservation Partnerships Program (RCPP) funding, awarded to BWSR in fall 2023, to be dedicated exclusively to implementing on-the-ground projects.



In May 2024, BWSR and NRCS executed a Programmatic Partnership Agreement (PPA-#3053), outlining project activities planned through 2028. The program will be delivered through an Alternative Funding Arrangement (AFA), allowing BWSR to work through its established network of SWCDs to provide financial assistance directly to producers. This model ensures a locally led process that is responsive to producers' needs and is anticipated to fund hundreds of thousands of acres of conservation practices.

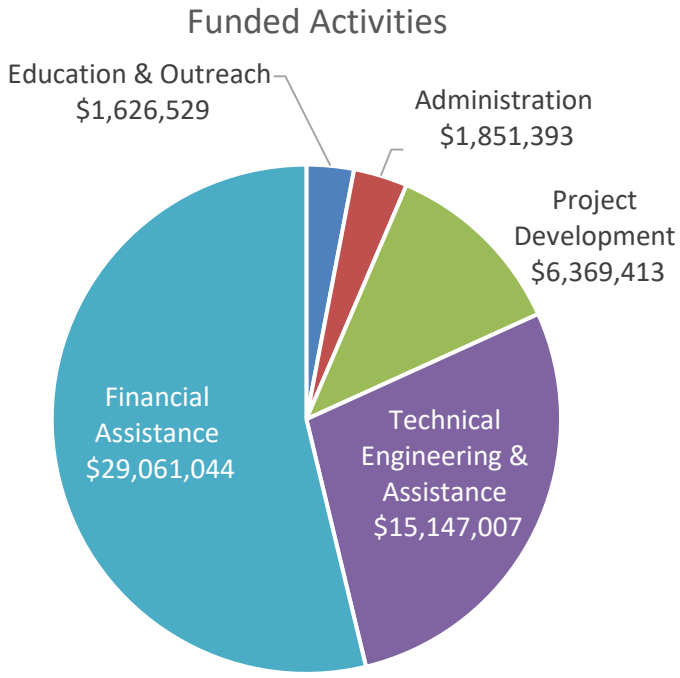
To systematically evaluate how these funds address the barriers identified in the Minnesota Soil Health Action Framework, BWSR will utilize its eLINK and SharePoint reporting systems to track the acres, locations, and types of practices installed. This approach directly addresses the framework's call for better data to track progress, impacts, and support decision-making. The data will be used to generate pollution reduction estimates via the Minnesota Pollution Control Agency's (MPCA) best management practice effects estimator tool (BEET).

The project is designed to achieve measurable outcomes that will:

- **Address the learning curve and transition time** for producers by providing reliable, ongoing technical support and investing in local staff and farmer mentors who can coach, facilitate peer-to-peer learning, and help ensure long-term success.
- **Directly address priority resource concerns** in Minnesota by reducing an estimate 6,000,000 pounds of nitrogen, 215,000 pounds of phosphorous, and 25,000 tons of sediment from entering our waters over the life of the project.
- **Build on local priorities** identified in state-approved watershed plans, a strategy recommended by the framework to ensure local relevance and flexibility.

- **Promote climate-smart agriculture** by implementing practices that align with Minnesota's Climate Action Framework to increase soil carbon, build resilience, and reduce emissions.
- **Enhance farm sustainability and productivity** by focusing on a systems approach that advances the five key principles of soil health.

Budgeted Activities



As of July 2025, the entirety of the grant programs supporting the Advancing Soil Health in Minnesota Agriculture project are fully operational. This project will continue through the end of calendar year 2028 or until all funds are expended. A review of the budgets submitted by participating SWCDs confirms that the financial focus is overwhelmingly dedicated to direct financial assistance for Minnesota farmers for practice adoption and capacity-building through SWCD staffing. This focus confirms the strategic intent of the funding: to remove the financial barriers for practice adoption and simultaneously build the human capacity needed to deliver soil health expertise.

Financial Assistance (On-the-Ground Practices)

Financial assistance represents the largest investment, dedicated to facilitating direct, on-the-ground action, totaling $29,061,044 or 54% of the project funds**.** This activity primarily utilizes federal funding to provide producers with the necessary cost share resources to implement transformative soil health practices. Participating SWCDs ensure local relevance by developing specific financial assistance polices tailored to local needs, comprehensive watershed management plans, and SWCD missions. These funds are instrumental in assisting produces with the incorporation of soil health systems into their existing farming operations.

Technical Engineering and Assistance

Technical engineering and assistance is a core activity, budgeted at $15,147,007 or 28% of the project cost, focusing on the specialized expertise required for successful conservation practice implementation. This activity encompasses the full technical lifecycle of implementation, including site assessment, surveying, preliminary design work, final design work, oversight, and project completion and certification. For soil health, this represents the one-on-one technical work necessary to integrate conservation practices effectively into a producer's farming operation.

This is a critical component of the conservation delivery system within the overall project, ensuring the high-quality technical support required to yield associated benefits to water quality, agricultural productivity, and sustainability.

Technical Service Area (TSA) 5, the Southwest Prairie Technical Service Area, made up of SWCDs in southwestern Minnesota, has successfully received project funds to enhance technical capacity by contracting with local farmers and agricultural consultants as mentors. This innovative approach aims to bridge the gap between technical staff and producers by utilizing individuals who possess firsthand, practical experience in implementing complex soil health practices like cover crops and no-till. As of November 2024, they have contracted with eleven farmers and eight professional agricultural consultants to mentor farmers across their 11-county region. These farmer mentors share personal knowledge, walk fields with producers to assess conditions, and provide tailored guidance on cover crop species selection and equipment calibration, with the objective of boosting the local adoption rate of effective soil health systems. Additional information on how the TSA is implementing their mentor program can be found in the November 2024 BWSR Snapshot.

Project Development

Project development represents the SWCDs' commitment to reaching individual producers and gathering pertinent farmer information. This activity's budget of $6,369,413 or 12% of total project cost is primarily dedicated to the initial time spent engaging with farmers and landowners interested in soil health. This foundational activity is used for initial engagement and preliminary information collection to customize assistance.

Initial engagement includes documenting key details about the farming operation, determining the number of acres involved, and clarifying specific conservation goals to ensure targeted and effective conservation planning.

Education and Outreach

The education and outreach activity is a targeted investment that represents 3% of the total project cost, funding critical awareness and outreach programs necessary to drive practice adoption within the agricultural community.

SWCDs plan to utilize these resources for high-impact activities such as organizing social media campaigns, local field days, creating promotional flyers and educational materials, and collaborating on farmer education workshops to share best practices and technical knowledge.

Project Administration

The project administration component represents a minimal yet essential investment, equating to 3% of the total $54 million investment. This critical element supports efficient project execution by funding local grant administration, essential reporting, and staff time for program oversight. The constrained dedication of resources in this category underscores the SWCD commitment to maximizing funding toward on-the-ground soil health practices.

Program Support and Outlook

As the Advancing Soil Health in Minnesota Agriculture project continues its implementation through 2028, the operational success of this model has generated significant enthusiasm for its long-term viability. The soil health

structure outlined within the Soil Health Action Framework has resonated across the conservation landscape, fostering a unified desire among stakeholders to sustain this momentum.

Local farmers have demonstrated a clear demand for this support, actively utilizing financial assistance to incorporate soil health systems and relying on the coaching provided by trusted mentors to ensure success. Similarly, SWCDs have embraced the program's flexibility, developed locally tailored policies and dedicated most of their budgets to direct on-the-ground implementation and technical capacity.

Furthermore, the successful execution of the Programmatic Partnership Agreement with NRCS illustrates the power of leveraging state contributions to maximize federal funding. Given the proven effectiveness of this locally led delivery system, there is strong, concurrent interest from local farmers, SWCD offices, and federal partners in continuing this program or establishing similar initiatives. Sustaining the collaborative framework will be essential to meeting the long-term demand for soil health resources in Minnesota.

Alliance to Advance Climate-Smart Agriculture

The Alliance to Advance Climate-Smart Agriculture program was developed by Rural Investment to Protect our Environment (RIPE) to pilot a new methodology (RIPE100) for computing producer payments for implementing conservation practices. Traditional conservation programs typically cover only a portion of implementation costs and do not account for broader natural resource benefits. Carbon markets capture some climate benefits but often exclude additional resource benefits and pay less than the cost of implementation.

The program tests a payment structure that provides producers with ecosystem service payments for implementing conservation practices based on the principle that conservation practices generating public benefits should be economically viable for producers. Participating farmers and ranchers are paid $100 per acre or animal unit for adopting climate-smart practices such as cover crops, no-till, nutrient management, and prescribed grazing. Producer contracts are 12 months in length, offering a low-risk opportunity to implement new practices.

The Alliance to Advance Climate-Smart Agriculture is funded by the USDA's Advancing Markets for Producers Initiative and partner contributions. Four states — Arkansas, Minnesota, North Dakota, and Virginia — are participating in the four-year pilot program, led by the Virginia Tech College of Agriculture and Life Sciences.

In Minnesota, BWSR competitively offered the program to SWCDs in the winter of 2023, and eight districts were operating the program by June 2024. BWSR provides leadership, direction, and financial contributions to support the program. Participating Minnesota SWCDs include East Otter Tail (partnering with Wadena SWCD), Fillmore (partnering with the Root River SWCD, which serves Houston County), and Kandiyohi, Redwood, Renville, and Stevens.

The USDA is providing $15.35 million in payments to Minnesota producers and nearly $2.5 million collectively to districts to support the program offering outreach, sign-ups and technical support; to BWSR to provide leadership and overall project direction; and the Minnesota Association of Soil and Water Conservation Districts (MASWCD) to provide support and training. BWSR is contributing $2 million in payments to Minnesota

producers, $704,000 for SWCD support, and over $95,000 in BWSR staff time. Minnesota is leveraging state funds to achieve a return of federal funds at more than five and one-half times the state contribution.

The alliance program emphasizes practices that provide climate-smart and soil health benefits. Applicants work with local SWCD staff to review current management, discuss program options, and develop a conservation plan. Producers submit applications along with Farm Service Agency (FSA) documents, and selections are made randomly according to established criteria designed to support historically underserved producers and maximize acres enrolled. All applicants must meet FSA eligibility requirements, and practices must conform to NRCS standards and specifications.

The alliance program plans to assess improvements in climate and natural resources across participating Minnesota acres as monitoring efforts are initiated. Greenhouse gas reductions will be estimated using the Carbon Management & Emissions Tools (COMET) once producer data is available. COMET-Planner will provide a streamlined method to estimate emissions, including carbon dioxide, methane, nitrous oxide, and total greenhouse gas equivalents per project and per acre. Producers may also choose COMET-Farm for a more detailed, operation-specific analysis. Future tracking of pollution reductions in nitrogen, phosphorus, and sediment will be conducted using the Pollutant Load Estimation Tool (PLET), providing a comprehensive view of both greenhouse gas and water-quality benefits across the state.

Minnesota has conducted three program sign-ups to date, generating extremely high interest. SWCDs report strong receptiveness to outreach efforts and widespread word-of-mouth engagement. The combination of logical practices, one-year contracts, and competitive payments has made the program attractive to many farmers, including those who have never participated in conservation programs. To date, over 1,100 producers have enrolled, covering nearly 140,000 acres or animal units and providing more than $14 million in payments to Minnesota producers.

Farmer Survey: Minnesota Office for Soil Health

Effective soil health programs depend on understanding the needs of Minnesota's farmers. To ensure state investments in research, outreach, and financial incentives are successful, it is critical to have clear data on the current knowledge, attitudes, and behaviors of producers across the state. MOSH is leading a comprehensive survey initiative to provide this foundational understanding and guide the future of soil health programming.

The purpose of the MOSH Farmer Survey is to provide robust, data-driven insights that will improve the design and delivery of state and local soil health efforts. The project has three primary objectives:

1. Establish a statewide baseline of current practice adoption, knowledge, and attitudes related to soil health, creating a benchmark to track trends over time.

2. Provide data interpretation to inform the strategic design of state incentive programs and local technical support, with analyses examining variations by geography and different types of farming operations.

3. Develop a targeted online survey for participants in BWSR's Soil Health program to evaluate program effectiveness, understand barriers to enrollment, and assess the potential for long-term practice adoption.

This project is being implemented in a phased approach to ensure thorough data collection and analysis. The design of the survey questionnaire was completed in early 2024 in consultation with key agricultural partners and potential users of the results. The initial statewide mail survey was sent to approximately 8,000 farmers in the summer of 2024, representing producers from eight distinct agricultural regions of Minnesota.

Following the initial data collection, the project is proceeding on schedule. In September 2025, MOSH published the Soil Management Perceptions and Experiences of Minnesota Farmers in 2024: A Statewide Assessment.

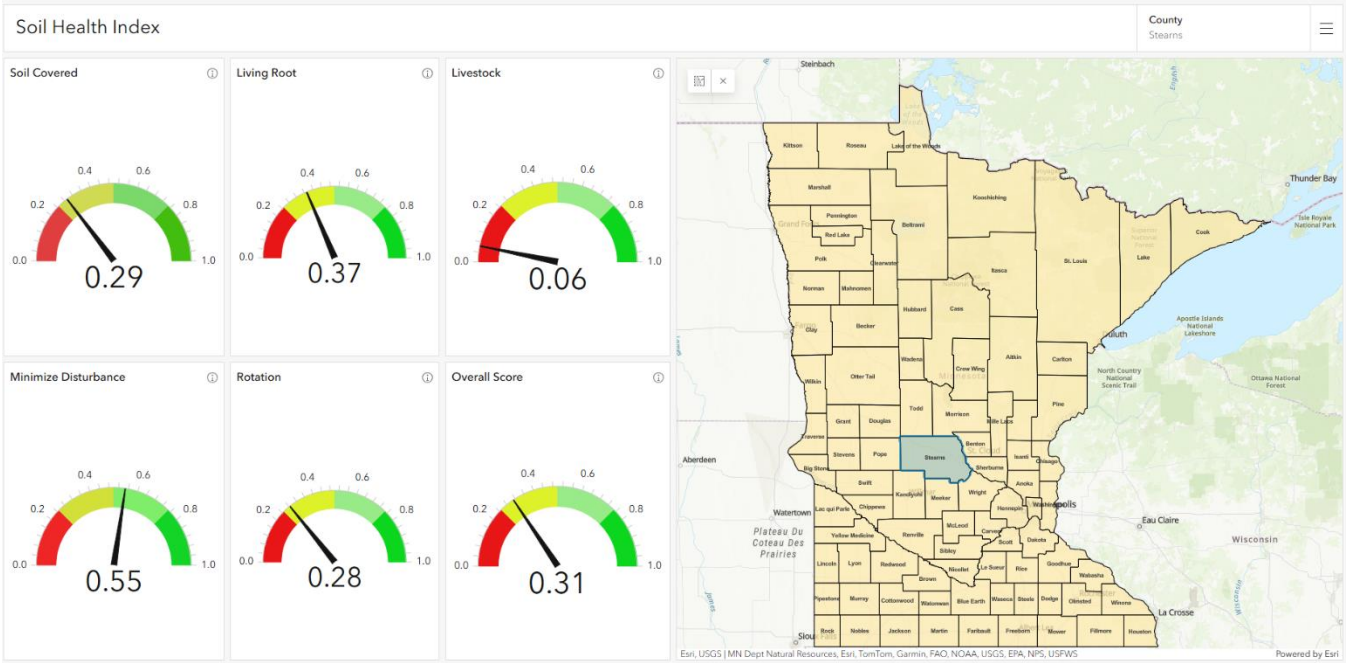
Collection of the online survey results are currently underway for the winter of 2025-2026. The findings from this comprehensive effort will provide an invaluable resource for refining Minnesota's soil health strategies and ensuring that public funds are targeted effectively to support producers and achieve state conservation goals.

Developing a Soil Health Measurement Framework

BWSR is developing a Soil Health Index to facilitate the tracking and assessment of soil health across the state. This initiative aims to produce a valuable, data-driven tool for policymakers and on-the-ground conservation staff to monitor the landscape changes and prioritize efforts.

Soil Health Index Design and Function

The Soil Health Index is intended to be built for every county and major watershed within Minnesota. When reliable data is available, this index will be presented via an online Geographical Information System (GIS) dashboard.



This conceptual mockup displays the proposed Soil Health Index dashboard interface, utilizing provisional 2022 baseline data.

The tool is being designed to track annual and biannual progress toward implementing the five key principles of soil health: keeping the soil covered, minimizing physical and chemical disturbances, maintaining living roots in the ground year-round, diversifying crop rotations, and integrating livestock onto the land. Baseline soil health data from 2017 and 2022 are currently being compiled for integration into the dashboard.

BWSR further plans to incorporate information on the availability of technical staff, weather, and commodity prices into the dashboard, which are critical variables that significantly influence farmer and landowner decision-making and the feasibility of adopting soil health systems.

Data Sources

Some of the reliable data for the Soil Health Index will be sourced from several key state and federal sources:

- Tillage and Erosion Survey Project
- USDA's National Land Cover Database
- MPCA's Best Management Practice (BMP) tracking database
- BWSR's eLINK reporting system

Challenges in Data Collection and Tracking

A significant difficulty in accurately assessing soil health progress is the challenge of finding reliable data on implementation efforts outside of report-driven conservation programs.

- **Voluntary Adoption is Undocumented:** Many farmers and landowners adopt soil health practices independently, without enrolling in government incentive programs. These voluntary, privately funded practices are often not reported to any state or federal database and can lead to an underestimation of the true adoption rate across the landscape.
- **Quantification Complexity:** Soil health is a complex biological, chemical, and physical concept. Indicators are highly sensitive to non-management variables like native soil type, topography, and climate. Interpreting indicators requires rigorous scientific frameworks to accurately distinguish changes due to intentional management from those due to inherent conditions, which adds complexity to standardized data collection.
- **Data Consistency and Comparability:** Integrating data from multiple sources (BWSR, USDA, MPCA) requires diligent management to ensure consistent reporting units, timeframes, and definitions. Differences in data collection methods across various programs can limit the comparability of information.
- **Lack of Universal Benchmarks:** While frameworks exist, there is an ongoing scientific challenge in establishing universally accepted and regionally relevant benchmarks for soil health that are accurate across Minnesota's diverse land uses (row crops, perennial systems, forests).

Conclusion: A Unified Path Forward

The successful implementation of the soil health initiatives outlined in this report demonstrates a pivotal shift in Minnesota's approach to soil health systems, moving from isolated efforts toward a unified, locally led strategy grounded in the Minnesota Soil Health Action Framework. By strategically investing the $21.114 million General Fund appropriation, the state has not only started to address critical resource concerns like nitrate leaching and soil erosion but has also successfully leveraged $42.85 million in federal support, multiplying the impact of every state dollar. This progress is made possible by the indispensable leadership of Soil and Water Conservation Districts, which have acted as the primary agents of change by tailoring technical assistance and equipment access to the unique needs of their local landscapes.

The response from the agricultural community has been remarkably positive, with over 1,100 producers already enrolling in climate-smart programs and many more participating in innovative peer-to-peer mentorship networks that bridge the gap between technical theory and on-farm reality. This engagement aligns with the March 10, 2025, MOSH report, *The State of Minnesota's Soil Health*, which documents an upward trend in the adoption of soil health practices across the state. However, the report further indicated that while these practices are gaining momentum, they still represent a marginal fraction of Minnesota's 21.5 million acres of cropland, with no-till and cover crop methods being utilized on only 5% and 2.82% of cropland, respectively. This highlights the significant gap that remains between current implementation and the state's total agricultural capacity.

As BWSR continues to develop data driven tools like the Soil Health Index, the state is in a better position to monitor progress and ensure long-term transparency. This collaborative momentum – driven by a shared

commitment among state agencies, local districts, and dedicated producers – will help secure a resilient future for Minnesota's soil, water, and agricultural economy.