

Stakeholder Engagement Results

Water (Increased Knowledge)

Goal:

Minnesota's water resources are better managed for both water quantity and quality, as a result of better understanding of the connections between surface water and groundwater.

Strategies:

- Research and demonstrate innovative, market-based policies and partnerships that solve local water issues in both forest-based regions and agriculture-based regions.
- Educate local officials on how to improve and protect water resources, including model projects and policies that can be emulated at all scales.
- Research, demonstrations, incentives, and policies to hold back water and increase evapotranspiration opportunities to prevent water pollution.
- Increase understanding of weather and future weather/climate patterns, and how these align with anticipated water needs across Minnesota.
- Research on the impacts of nitrogen and effective agriculture and urban practices to improve surface and groundwater quality, as well as manage water quantity and mitigate the impacts of agriculture drainage and urban stormwater runoff.

Water (Improved Outcomes)

Goal:

Minnesota is prepared for water volume changes, both excesses and shortages, and extreme runoff events resulting from climate and land use changes.

Strategies:

- Research and demonstrate market-based policies that are economically viable and help pay for the land use and conservation practices needed to achieve water resources protection, especially in agricultural areas.

Strategic Planning Workshop*

Water (Increased Knowledge & Improved Outcomes)

Goal:

Minnesota's water resources are better managed for both water quality and quantity. (7)

Strategies:

- Research and demonstrate innovative, market-based policies and partnerships that solve local water issues in both forest-based regions and agriculture-based regions. - 7

- Research and demonstrate market-based policies that are economically viable and help pay for the land use and conservation practices needed to achieve water resources protection, especially in agricultural areas. - 7

- Research effective water use scenarios to identify improvements needed to ensure the state's water resiliency and sustainability (including modeling water scenarios, managing water on land, optimizing use to prevent overuse of groundwater, improve water reuse and waste water management).
- Identify and promote workable, holistic, multi-benefit, diverse, and viable (economically and socially, etc.) solutions for storing more water on the land, through both engineered and natural solutions targeted at critical areas.
- Support cities, counties, and watershed districts with developing climate resiliency and adaptation plans, and processes for funding and implementing those plans.
- Compile existing research, identify gaps, and develop research to quantify land use and land cover changes, in order to identify restoration and protection needs to achieve sustainable water systems.

- Research effective water use scenarios to identify improvements needed to ensure the state's water resiliency and sustainability (including modeling water scenarios, managing water on land, optimizing use to prevent overuse of groundwater, improve water reuse and waste water management). - 5

- Support cities, counties, and watershed districts with developing climate resiliency and adaptation plans, and processes for funding and implementing those plans. - 3

- Fund pre-design and design of improved wastewater infrastructure for small communities - 8
- Fund waste water improvement projects and fund a rural septic assistance program to install the latest technology- 7
- Fund research on pesticide impacts & demonstrate projects for better alternatives- 5
- Measure drinking water contaminants in surface water used for drinking water- 4
- Prevent contamination of surface and groundwater.
- Prototype for wastewater treatment that includes energy efficiency-10
- Wastewater facility upgrades- 7

Habitat, Fish, and Wildlife

Goal:

Minnesota has healthy and diverse wildlife and plant populations that sustain and enhance the state's environment, economy, and quality of life.

Strategies:

- Monitor the biologic and environmental health of systems through high quality research, to support management of lands and waters.
- Research key issues and develop strategies to combat them (ex. bird/insect crash).
- Species-specific and habitat-level research and management to effectively maintain, protect, and restore habitats and populations.
- Research to inform managing plant, fish, and wildlife communities to adapt to climate change.
- Conservation of additional lands and support for management of currently protected lands.

Habitat, Fish, and Wildlife

Goal:

Minnesota has healthy and diverse wildlife and plant populations that sustain and enhance the state's environment, economy, and quality of life. - 12

Strategies:

- Monitor and evaluate the biologic, [chemical](#), and environmental health of systems through high quality research, to support management of lands and waters. - 6
- Research to inform managing plant, fish, and wildlife communities to adapt [to emerging issues, such as invasive species and changing climate](#). - 7
- Conservation of additional lands, [through acquisition or easement](#), and support for management of currently protected lands. - 6

Outdoor Recreation & Open Space

Goal:

All Minnesotans, especially young people, have access to and take advantage of opportunities for culturally relevant and innovative connections to the lands and waters of Minnesota.

Strategies:

- Address the social, economic, and physical barriers to outdoor recreation through programs that encourage inclusivity and address inequities.
- Research people's interests in outdoor recreation and understand barriers to participation.
- Assess programs, activities, and physical spaces for their accessibility; support changes to adapt and retrofit to welcome more people.
- Through collaborative efforts, provide curriculum, programs, and outdoor environmental events that teach K-12 students what public lands are, introduces them to public lands near them, and encourages them to explore local public lands.
- Through partnerships between schools, environmental learning centers, and other community resources, provide evidence-based, engaging programs to bring students to outdoor experiences.
- Capital projects that develop culturally relevant, accessible, and resilient outdoor recreation facilities, infrastructure, and equipment rental programs that create innovative experiences (including parks, trails, fishing piers, shoreline fishing areas, birding trails, shelters, etc.).

Outdoor Recreation & Open Space

Goal:

All Minnesotans, especially young people, have access to and take advantage of opportunities for culturally relevant and innovative connections to the lands and waters of Minnesota. - 9

Strategies:

- Assess programs, activities, and physical spaces for their accessibility; support changes to adapt and retrofit to welcome more people. - 2
- Through collaborative efforts, provide curriculum, programs, and outdoor environmental events that teach K-12 students what public lands are, introduces them to public lands near them, and encourages them to explore local public lands. -3
- Through partnerships between schools, environmental learning centers, and other community resources, provide evidence-based, engaging programs to bring students to outdoor experiences. -3
- Capital projects that develop culturally relevant, accessible, and resilient outdoor recreation facilities, infrastructure, and equipment rental programs that create innovative experiences (including parks, trails, fishing piers, shoreline fishing areas, birding trails, shelters, etc.). -10
- [Fund capital projects that Minnesotans can access \(multi-use\) and use statewide- 8](#)

Members did not discuss this section.

Air & Energy

Goal:

Minnesota achieves reliance on non-polluting, renewable energy in all sectors (including transportation, building, industry, agriculture, and others).

Strategies:

- Encourage bundling renewable energy production and battery storage.
- Demonstrate the ability and statewide potential to generate solar energy on perennially vegetated lands, reducing CO2 and water runoff, while making the enterprise economically viable.
- Incentivize the use of non-polluting renewable energy in agriculture, industries, and commercial transportation.
- Demonstrate community-scale, net zero renewable energy systems.
- Fund energy efficiency improvements and renewable energy for rental properties, small businesses, and schools.

Air & Energy

Goal:

Minnesota advances reliance on renewable energy and energy efficiency in all sectors. - 6

Strategies:

- Demonstrate the ability and statewide potential to generate solar energy on perennially vegetated lands, reducing CO2 and water runoff, while making the enterprise economically viable. - 6
- Develop and demonstrate the utilization of renewable energy in agriculture, industries, and transportation—10
- Fund renewable energy research that has a benefit for Minnesota. ~~industry.~~
- ~~All LCCMR projects should incorporate sustainable energy implementation i.e. solar panels, geothermal, trees, wind—3~~
- Encourage sustainable energy implementation.
- ~~Develop prototype for energy efficiency for local community projects—3~~
- Develop and demonstrate renewable energy and energy efficiency for local communities.

Working Lands

Goal:

Working lands in Minnesota, including forestry, grasslands, and agricultural lands, provide long-term benefits to fish, wildlife, and people.

Strategies:

- Through demonstration, educate people on the opportunity for working lands to slow and store water for multiple benefits (water quality, habitat, flood mitigation, etc.) as well as for carbon sequestration
- Develop innovative, market-based policies to make substantive conservation efforts financially feasible.
- Preserve and protect the watersheds that are already in good shape.
- Support and provide technical assistance to private landowners on cost-effective ways to develop and restore diverse, native habitat.
- Conservation actions that prioritize the needs of vulnerable, declining, poorly-understood, and sensitive species.
- Improve and demonstrate how working lands can be economically productive and good habitat.
- Increase understanding and assessment of tradeoffs among different environmental and societal goals to improve decisions on working lands.
- Evaluate, prioritize, and demonstrate how working lands and renewable energy can be mutually beneficial.
- Use public open space to demonstrate climate change adaptation, mitigation, and prevention.
- Create or use existing open spaces, or use them to demonstrate, CO2 storage, heat sinks, flood prevention.
- Promote, research, and evaluate Best Management Practices (BMPs) on working lands, in order to provide long-term benefits to fish and wildlife.
- Encourage landscape-level and eco-type planning, instead of parcel-level.
- Identify high-quality habitat, recreation open-spaces, and other high-priority areas for action.
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Working Lands

Goal:

Working lands in Minnesota, including forestry, grasslands, and agricultural lands, provide long-term benefits to fish, wildlife, and people.- 8

Strategies:

- ~~Preserve and protect the watersheds that are already in good shape.~~ 5
 - Preserve and protect watersheds that are not impaired.

Working Lands (Continued)

- Outreach, education, and engagement through citizen science for landowners, operators, and others on how to economically manage for water resiliency.
- Create market mechanisms for carbon sequestration on working lands.
- Demonstrate how to add diverse cropping systems and incentivize continuous living crops.
- Research and demonstration that show the practical value of regenerative agriculture.
- Development and implementation of agricultural cropping systems with diverse crops that provide multiple benefits, including exploring markets and supply chain.
- Education and public outreach to change landscape and ecosystem norms.
- Research and evaluation of approaches that achieve goals.
- Projects that enlist the support of multiple agencies and organizations.

- Fund pilot projects that comprehensively address impacts of long-term changes to Minnesota's climate- 9
- Develop and implement agricultural production systems that provide multiple benefits- 4 (4)
- Conserve lands for endangered, threatened, and special concern species. (7)

*Has not been reviewed for accuracy.
Represents status at end of day, November 13, 2019.
Commission did not review all sections.
No official action taken.