

ENRTF Strategies – DRAFT (June 25, 2024)

Member Comments Incorporated

RESILIENCY

Goal 1: Minnesota’s environment, natural resources, and communities are resilient in the face of climate change, land use changes, and extreme weather events.

Fund projects that...

Applied Research & Technology Development (4 members selected)

1. Identify and promote workable, holistic, multi-benefit, diverse, and economically and socially viable ~~(e.g., economically and socially)~~ solutions for storing more water on the land ~~reducing the impacts of climate change, land use changes, and extreme weather events~~, through both engineered and natural solutions targeted at critical areas.

Demonstration (4 members selected)

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

3. Use public open space to demonstrate climate change adaptation, mitigation, and prevention.

Education, Awareness, & Outreach (4 members selected)

4. Broaden understanding of effective climate adaptation management practices among private landowners.

5. Develop collaborations and networks to share and learn about innovative and effective strategies.

Planning (3 members selected)

6. Support ~~cities, counties, and watershed districts with developing~~ the development and implementation of local climate resiliency and adaptation plans, ~~and processes for funding and implementing those plans~~ that address landscape and species resiliency.

Implementation (2 members selected)

Acquisition (2 members selected)

Restoration (2 members selected)

Construction (2 members selected)

7. Protect and restore wetlands, forests, prairies, and other critical systems habitats that enhance biodiversity and provide multiple community resilience benefits.

8. Implement land and water management practices that enhance ecosystem resilience to climate change.

Monitoring (2 members selected)

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Coordination & Collaboration (2 members selected)

Basic Research (1 member selected)

9. 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-resilient natural systems.

Equity (1 members selected)

Evaluation & Assessment (1 member selected)

Stewardship (1 member selected)

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FISH AND WILDLIFE (SPECIES)

Goal 3: Minnesota has healthy and diverse aquatic and terrestrial wildlife and plant populations that sustain and enhance the state’s environment, economy, and quality of life.

Fund projects that...

Basic Research (4 members selected)

1. Research ~~and manage~~ species and ecosystems and develop strategies to effectively manage, maintain, protect, and restore habitats and populations.
- ~~2. Research key issues and develop strategies to combat them (e.g., bird/insect crash).~~
- ~~3. Research plant, fish, and wildlife communities to inform management in relation to climate change.~~

Monitoring (4 members selected)

4. Monitor the biologic and environmental health of systems ~~through high-quality research~~ to support and improve species management and conservation strategies ~~of lands and waters.~~

Education, Awareness, & Outreach (3 members selected)

Stewardship (3 members selected)

5. Support and provide technical assistance and planning support to private landowners on cost-effective ~~ways, trustworthy strategies and technologies~~ to develop and restore diverse, native habitat.
6. Promote public awareness on the importance of diverse wildlife and plant populations through comprehensive education programs.

Implementation (3 members selected)

Restoration (4 members selected)

Acquisition (3 members selected)

7. Implement conservation actions that prioritize the needs of vulnerable, declining, poorly understood, ~~and or~~ sensitive species.
8. Prevent the introduction, reduce the spread, or develop and demonstrate alternative control techniques for invasive species.
9. Conserve and restore additional lands and support ~~for~~ management of currently protected lands.

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10. Develop and implement plans that strategically conserve and restore large, connected natural areas, prevent habitat fragmentation, increase habitat connectivity, and allow species to shift their range.

Evaluation & Assessment (2 members selected)

11. Evaluate the effectiveness of current management practices and past investments to sustain and enhance wildlife and native plant populations.

Applied Research & Technology Development (2 members selected)

Coordination & Collaboration (2 members selected)

Demonstration (2 members selected)

Planning (1 member selected)

Construction (1 member selected)

Other (1 members selected) – Adaptive Management

Equity (0 members selected)

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ACCESS AND OPPORTUNITIES

Goal 7: All Minnesotans, especially young people, have access to and take advantage of opportunities, including culturally relevant and innovative connections to the lands and waters of Minnesota.

Fund projects that...

Education, Awareness, and Outreach (4 members selected)

- ~~1. Through partnerships between schools, environmental learning centers, and other community resources, p~~Provide evidence-based, hands-on, and engaging curriculum, programs, and outdoor environmental events to bring a diversity of students and adults to outdoor experiences.
- ~~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. Create mentorship programs, leadership opportunities, and learning experiences for a diversity of young people to explore and pursue careers in the environment and natural resources.~~
- ~~4. Enhance environmental education initiatives by integrating diverse cultural perspectives, experiences, and partnerships that foster environmental stewardship in all communities.~~

Construction (4 members selected)

- ~~5. Capital projects that d~~Plan, design, and ddevelop culturally relevant, accessible, and resilient outdoor recreation facilities, and infrastructure – including recreation areas, parks, trails, fishing piers, and shelters –, and equipment rental programs that create innovative-new experiences ~~(e.g., parks, trails, fishing piers, shoreline fishing areas, birding trails, shelters).~~

Equity (4 members selected)

- ~~6. Address the social, economic, and physical barriers to outdoor recreation through programs that encourage inclusivity and address inequities~~ so that public lands and waters are accessible to all.
- ~~7. Assess programs, activities, and physical spaces for their accessibility and effectiveness~~; support and implement changes to adapt and retrofit them to welcome more people.

Coordination and Collaboration (4 members selected)

- ~~8. Collaborate and partner with indigenous, local, BIPOC, and underserved communities to develop~~ culturally relevant, inclusive, and accessible environmental, natural resource, and outdoor recreation programs, practices, curriculum, and facilities.

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Stewardship (3 members selected)

9. Implement community-led initiatives that promote environmental stewardship.

Acquisition (3 members selected)

10. Expand networks of trails, parks, and natural areas to connect green spaces seamlessly, improve accessibility and safety, and encourage diverse populations to recreate and engage with nature.

Planning (3 members selected)

11. Develop roadmaps for outdoor recreational opportunities across the state providing communities a vision from which to build.

Demonstration (3 members selected)

Basic Research (2 members selected)

12. Research people's interests in outdoor recreation and understand barriers to participation.

Implementation (2 members selected)

Restoration (2 members selected)

Evaluation & Assessment (2 members selected)

Monitoring (1 member selected)

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WATER

Goal 2: Minnesota’s water resources are better managed for both water quantity and quality to support aquatic life, drinking water, recreation, and other uses.

Fund projects that...

Basic Research (4 members selected)

1. Increase understanding of weather and future weather and climate patterns, and how these align with anticipated water needs across Minnesota.
2. Research effective water use scenarios – including modeling water scenarios, managing water on land, optimizing use to prevent overuse of groundwater, and improving water reuse and wastewater management – to identify improvements needed to ensure the state’s water resiliency and sustainability.

Monitoring (4 members selected)

Restoration (4 members selected)

Applied Research & Technology Development (3 members selected)

Demonstration (3 members selected)

3. Research impacts of nutrients, agricultural runoff, and urban stormwater on surface water and groundwater quality and quantity, as well as opportunities to mitigate those impacts.
4. Research and demonstrate innovative, market-based policies and partnerships that solve local water issues in both forest-based regions and agriculture-based regions.
5. Research, implement demonstrations, and develop incentives and policies related to holding back water and increasing evapotranspiration opportunities to prevent water pollution.

Education, Awareness, & Outreach (3 members selected)

6. Educate local officials on how to improve and protect water resources, including model projects and policies that can be emulated at all scales.

Implementation (3 members selected)

Construction (3 members selected)

Planning (2 members selected)

Acquisition (2 members selected)

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Evaluation & Assessment (2 members selected)

7. Evaluate the effectiveness of current management practices and past investments to improve water resources.

Stewardship (2 members selected)

Coordination & Collaboration (2 members selected)

Equity (1 member selected)

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LAND

Goal 4: Minnesota’s public and private lands – including forests, grasslands, wetlands, and agricultural lands – provide long-term benefits to fish, wildlife, and people.

Fund projects that...

Demonstration (4 members selected)

1. Promote, research, and evaluate best management practices (BMPs) on public and private lands, in order to provide long-term benefits to fish and wildlife.
2. Research, develop, and demonstrate agricultural production processes and systems that are significantly less carbon-intensive and decrease the loss of nutrients into groundwater and surface water.
3. Improve and demonstrate how working lands can be economically productive and good habitat.
4. Research and demonstrate the practical value of regenerative agriculture.
5. Develop and implement agricultural cropping systems with diverse crops that provide multiple benefits, including exploring markets and supply chain.

Education, Awareness, & Outreach (4 members selected)

6. Enhance education and public outreach to change landscape and ecosystem norms.
7. Educate people through demonstration on the opportunity for public and private lands to slow and store water for multiple benefits (e.g., water quality, habitat, flood mitigation) as well as for carbon sequestration.

Restoration (5 members selected)

Acquisition (4 members selected)

Implementation (3 members selected)

8. Preserve and protect the watersheds that are already in good shape.
9. Identify high-quality habitat, recreation open spaces, and other high-priority areas for action.

Applied Research & Technology Development (3 members selected)

10. Develop innovative, market-based policies to make substantive conservation efforts financially feasible.

Coordination & Collaboration (3 members selected)

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11. Prioritize projects that enlist the support of multiple agencies and organizations.

Basic Research (2 members selected)

12. Increase understanding and assessment of tradeoffs among different environmental and societal goals to improve decisions on public and private lands.

Planning (2 members selected)

13. Encourage landscape-level and eco-type planning, instead of parcel-level.

Construction (2 members selected)

Equity (1 member selected)

Evaluation & Assessment (1 member selected)

Stewardship (1 member selected)

Monitoring (0 members selected)

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EMERGING ISSUES

Goal 5: Minnesota responds quickly and proactively to emerging environmental and natural resources issues.

Fund projects that...

Applied Research & Technology Development (4 members selected)

Coordination & Collaboration (4 members selected)

Implementation (4 members selected)

Restoration (3 members selected)

Evaluation & Assessment (3 members selected)

Basic Research (2 members selected)

Demonstration (2 members selected)

Education, Awareness, & Outreach (2 members selected)

Monitoring (1 member selected)

Acquisition (1 member selected)

Equity (0 members selected)

Planning (0 members selected)

Construction (0 members selected)

Stewardship (0 members selected)

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ENERGY

Goal 6: Minnesota achieves reliance on renewable energy in all sectors, including transportation, building, industry, agriculture, and others.

Fund projects that...

Demonstration (4 members selected)

1. 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.
2. Demonstrate community-scale, net-zero renewable energy systems.
3. Evaluate, prioritize, and demonstrate how working lands and renewable energy can be mutually beneficial.

Basic Research (3 members selected)

Applied Research & Technology Development (3 members selected)

Planning (3 members selected)

Education, Awareness, & Outreach (3 members selected)

Equity (3 members selected)

Implementation (3 members selected)

4. Incentivize the use of nonpolluting renewable energy in agriculture, industries, and commercial transportation.
5. Fund energy efficiency improvements and renewable energy for rental properties, small businesses, and schools.
6. Encourage bundling renewable energy production and battery storage.

Construction (3 members selected)

Coordination & Collaboration (2 members selected)

Evaluation & Assessment (2 members selected)

Monitoring (0 members selected)

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Acquisition (0 members selected)

Restoration (0 members selected)

Stewardship (0 members selected)