

DRAFT - ENRTF Strategies (as of 7/29/2024)

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.

Strategies:

Fund projects that:

1. Research, demonstrate, and (Add: /or) promote workable, holistic, multi-benefit, and economically- and socially-viable solutions for reducing the impacts of climate change, land use changes, (Delete: ~~and~~) (Add: or) extreme weather events, through both engineered and natural solutions targeted at critical areas.

Staff Suggestion:

Research, demonstrate, and (Add: /or) promote (Delete: ~~workable, holistic, multi-benefit~~) (Add: comprehensive) and (Delete: ~~economically and socially~~) viable solutions for reducing the impacts of climate change, land use changes, (Delete: ~~and~~) (Add: or) extreme weather events (Add: on the environment and natural resources), through both engineered and natural solutions targeted at critical areas.

2. Broaden understanding of effective climate adaptation management practices among landowners through education, outreach, technical assistance, and (Add: /or) the development of collaborations and networks to share and learn about new and innovative practices.

Staff Suggestion:

Broaden understanding (Add: and implementation) of effective climate adaptation management practices (Add: for natural resources) among landowners through education, outreach, technical assistance, and (Add: /or) the development of collaborations and networks to share and learn about new and innovative practices.

Option 1:

3. Support the development (Delete: ~~and implementation~~) of local climate resiliency and adaptation plans (Add: for natural resources and/or the implementation of land and water protection, restoration, or management practices) that address landscape and species resiliency and diversity.

Option 2:

3. Support the development (Delete: ~~and implementation~~) of local climate resiliency and adaptation plans that address landscape and species resiliency and diversity.
4. Implement land and water management practices and (Add: /or) protect and restore wetlands, forests, prairies, and other critical systems to enhance biodiversity and provide multiple community resilience benefits.

DRAFT - ENRTF Strategies (as of 7/29/2024)

(~~Delete: X. 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 resilient natural systems.~~)

DRAFT - ENRTF Strategies (as of 7/29/2024)

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.

Strategies:

Fund projects that:

1. Research impacts of runoff, stormwater, (~~Delete: and~~) (~~Add: or~~) contaminants on surface water (~~Delete: and~~) (~~Add: or~~) groundwater quality and develop practical solutions (~~Add: to prevent or address these impacts~~).
2. Research current and future water supply and use (~~Delete: —including modeling water scenarios, mapping resources, managing water on land, optimizing use, and improving water reuse—to identify improvements needed-~~) to support planning efforts and implementation of best management practices and ensure the state's water resiliency and sustainability.
3. Increase understanding of weather and future weather and climate patterns and its potential impact on water resources.

Staff Suggestion:

Increase understanding (~~Delete: and awareness~~) of weather (~~Delete: and future weather~~) and climate patterns and (~~Delete: its~~) (~~Add: their~~) potential impact on water resources.

4. Demonstrate innovative practices, strategies, and (~~Add: /or~~) partnerships that prevent (~~Delete: and~~) (~~Add: or~~) reduce water issues in urban, suburban, (~~Delete: and~~) (~~Add: or~~) rural regions.
5. Implement measures to improve water quality and (~~Add: /or~~) restore (~~Delete: and~~) (~~Add: or~~) enhance habitats, shoreline, (~~Delete: and~~) (~~Add: or~~) natural hydrology in lakes, rivers, (~~Delete: and~~) wetlands (~~Add: , and other surface waters, with an emphasis on efforts that incorporate coordination and collaboration among tribal, state, and local agencies and community partners~~).
6. Provide educational opportunities (~~Delete: and~~) (~~Add: or~~) technical assistance programs for teachers, students, state and local decision-makers, landowners, (~~Delete: and~~) (~~Add: or~~) the public on how to improve and protect water resources, including groundwater, surface water, and stormwater systems.
7. Monitor and assess the condition of (~~Add: groundwater or surface water, including~~) lakes, rivers, (~~Add: and~~) wetlands, (~~Delete: and groundwater-~~) on a regular cycle and provide a long-term data set to support decision-making and evaluate efforts.

(~~Delete: X-Evaluate the effectiveness of current management and restoration practices and past investments to improve water resources.-~~)

DRAFT - ENRTF Strategies (as of 7/29/2024)

(Delete: ~~X. Enhance coordination and collaboration among tribal, state, and local water agencies and community partners to improve the effectiveness and efficiency of water management.)~~

DRAFT - ENRTF Strategies (as of 7/29/2024)

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.

Strategies:

Fund projects that:

1. Research species (~~Delete: and-~~) (*Add: or*) ecosystems and develop strategies to effectively manage, maintain, protect, and restore healthy habitats and populations.
2. Monitor the (~~Delete: biologic and environmental-~~) health of (*Add: natural*) systems to support and improve species management and conservation strategies.
3. Support and provide technical assistance and (*Add: /or*) planning support to private landowners on cost-effective, proven strategies and technologies to develop and restore diverse, native habitat.
4. Promote public awareness on the importance of diverse wildlife and plant populations through comprehensive education programs.
5. Prevent the introduction, reduce the spread, or develop and demonstrate alternative control techniques for invasive species.

Option 1:

6a. Develop plans and (*Add: /or*) implement conservation actions to protect, conserve, ~~and or~~ restore species, with a priority on (*Add: efforts that maintain or create connected, continuous*) habitat (*Add: or address*) (~~Delete: connectivity and-~~) the needs of vulnerable, declining, poorly understood, or sensitive species.

Option 2:

6b. Develop plans and (*Add: /or*) implement conservation actions to protect, conserve, (~~Delete: and-~~) (*Add: or*) restore species (~~Delete: ,with a priority on habitat connectivity and the needs of vulnerable, declining, poorly understood, or sensitive species.~~)

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

DRAFT - ENRTF Strategies (as of 7/29/2024)

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.

Strategies:

Fund projects that:

1. Develop, demonstrate, and (Add: /or) evaluate new and innovative practices and processes on public and private lands, including agricultural and forest land, that provide multiple, long-term environmental and economic benefits (Add: , including benefits) related to habitat, water quality and quantity, (Add: soil health,) and carbon sequestration.

Staff Question:

Are economic considerations beyond the scope of the ENRTF?

2. Enhance education, technical assistance, (Delete: ~~and~~) (Add: or) public outreach to (Delete: ~~change landscape and ecosystem norms and~~) promote the (Delete: ~~adoption~~) (Add: application) of practices beneficial to the environment (Delete: ~~and,~~) natural resources (Add: , and all Minnesotans).

3. Acquire and conserve minimally disturbed lands that provide the greatest capacity for multiple conservation benefits to humans, fish, wildlife, and water resources.

4. Restore and enhance lands to provide high-quality natural resource, ecological, or recreational value.

5. Foster collaboration among diverse groups, (Delete: ~~enlist~~) (Add: demonstrate) the support of multiple (Delete: ~~agencies and organizations~~) (Add: stakeholders), and (Add: /or) incorporate (Add: outreach to local and tribal communities) (Delete: ~~tribal consultation~~).

Staff Question:

Would members prefer strategy #5 as a strategy specifically under this goal, as a criteria/factor in evaluating all proposals, or both?

(Delete: ~~X. Increase understanding and assessment of tradeoffs among different environmental and societal goals to improve decisions on public and private lands.~~)

-

(Delete: ~~X. Collect, compile, and distribute foundational data on critical land and mineral resources to support sustainable resource management.~~)

(Delete: ~~X. Encourage landscape-level and eco-type planning, instead of parcel-level.~~)

DRAFT - ENRTF Strategies (as of 7/29/2024)

EMERGING ISSUES

GOAL 5: MINNESOTA RESPONDS QUICKLY AND PROACTIVELY TO EMERGING ENVIRONMENTAL AND NATURAL RESOURCES ISSUES.

Strategies:

Fund projects that:

1. Identify, assess, and (Add: /or) prioritize potential threats to the environment and natural resources.
2. Research and (Add: /or) develop technologies, proactive measures, and emergency response actions to detect (Delete: and-) (Add: or) address emerging or emergency threats to the environment and natural resources.

Staff Suggestion:

Research and (Add: /or) develop technologies (Delete: ,proactive) (Add: and) measures (Delete: ,and emergency response actions) to detect (Delete: and-) (Add: or) address emerging or emergency threats to the environment and natural resources.

3. Create collaborations and build partnerships among all parties – including academic institutions, government agencies, non-government organizations, communities, and the private sector – to foster innovation and leverage resources and expertise.

Staff Suggestion:

Create collaborations and build partnerships among all parties – including academic institutions, government agencies, non-government organizations, communities, and the private sector – to foster innovation (Delete: and,) leverage resources and expertise (Add: , and better address emerging threats to the environment and natural resources).

4. Enhance coordination and interagency collaboration among federal, state, tribal, and local governments to ensure a unified response.
5. Implement proactive measures to prevent or minimize the impacts from emerging environmental or natural resource issues.
6. Implement natural resource corrective actions in response to emergency issues where delay will be detrimental to the environment and natural resources.

Staff Suggestion:

DRAFT - ENRTF Strategies (as of 7/29/2024)

Implement natural resource corrective actions (~~in response to emergency issues~~) where delay will be detrimental to the environment and natural resources.

7. Restore impacted ecosystems to minimize the loss of (~~ecological services~~) (~~benefits provided by these systems to people, fish, plants, and wildlife~~).

~~(Raise public awareness about emerging environmental issues and the importance of proactive measures.)~~

~~(Establish comprehensive environmental monitoring networks to detect changes and potential threats.)~~

(Add: The LCCMR:)

(Add:

1. Explores revised processes for requesting, evaluating, and awarding funds for emerging issues to ensure funds are available on a timely basis throughout the year.)

DRAFT - ENRTF Strategies (as of 7/29/2024)

ENERGY

GOAL 6: MINNESOTA ACHIEVES RELIANCE ON RENEWABLE ENERGY IN ALL SECTORS, INCLUDING TRANSPORTATION, BUILDING, INDUSTRY, AGRICULTURE, AND OTHERS.

Strategies:

Fund projects that:

1. Research and develop new and innovative renewable energy (~~Delete: and~~) (Add: or) fuel technologies, including biofuels, e-fuels, sustainable aviation fuels, energy storage, and others.

Staff Suggestion:

Research and develop new and innovative renewable energy (~~Delete: and~~) (Add: or) fuel technologies, including biofuels, e-fuels, sustainable aviation fuels, (Add: and) energy storage (~~Delete: , and others~~).

2. Evaluate, demonstrate, (~~Delete: and~~) (Add: and/or) assess renewable energy systems or fuels for economic viability, compatibility with other land uses, and (~~Delete: holistic, life-cycle assessments of~~) environmental and natural resource impacts (Add: over the full lifecycle of the technology).
3. Develop and (Add: /or) implement plans that identify, prioritize, and coordinate efforts to reduce energy consumption and (Add: to) transition to renewable energy through land use planning, infrastructure, education and awareness, and other methods.
4. Encourage and support the use of renewable energy and energy efficiency in agriculture, mining, industry, utilities, transportation, homes, (~~Delete: and~~) (Add: or) businesses.
5. Ensure equitable access to renewable energy and (Add: /or) energy efficiency programs in all communities.
6. Provide inclusive education and (Add: experiential learning) (~~Delete: training~~) programs to build a skilled and diverse workforce for the renewable energy sector.

DRAFT - ENRTF Strategies (as of 7/29/2024)

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.

Staff Suggestion:

All Minnesotans, especially young people, have access to and take advantage of opportunities (~~Delete: ,including culturally relevant and innovative.~~) (~~Add: to~~) connect (~~Delete: ions~~) to the lands and waters of Minnesota (~~Add: ,including in culturally relevant and innovative ways~~).

Strategies:

Fund projects that:

1. Address social, economic, (~~Delete: and~~) (~~Add: or~~) physical barriers to outdoor recreation through programs that encourage inclusivity and address inequities so that public lands and waters are accessible to all.

Staff Suggestion:

Address social, economic, (~~Delete: and~~) (~~Add: or~~) physical barriers to (~~Add: natural resource-based~~) outdoor recreation through programs that encourage inclusivity and address inequities so that public lands and waters are accessible to all.

2. Assess programs, activities, (~~Delete: and~~) (~~Add: or~~) physical spaces for their accessibility and effectiveness and (~~Add: /or~~) implement changes to adapt and retrofit them to welcome more people.

3. Provide evidence-based, hands-on, and engaging curriculum, programs, (~~Delete: and~~) (~~Add: or~~) outdoor events to bring a diversity of students and (~~Add: /or~~) adults to outdoor experiences.

Staff Suggestion:

Provide evidence-based, hands-on, and engaging curriculum, programs, (~~Delete: and~~) (~~Add: -or natural resource-based~~) outdoor events to bring a diversity of students and/or adults to outdoor experiences.

4. Create mentorship programs, leadership opportunities, and (~~Add: /or~~) learning experiences for a diversity of young people to explore and pursue careers in the environment and natural resources.

5. Enhance environmental education initiatives by integrating diverse cultural perspectives, experiences, and partnerships that foster environmental stewardship in all communities.

DRAFT - ENRTF Strategies (as of 7/29/2024)

6. Develop (~~Delete: roadmaps~~) (~~Add: local or regional plans to enhance~~) (~~Delete: for~~) (~~Add: natural resources-based~~) outdoor recreational opportunities (~~Add: in communities~~) across the state (~~Delete: providing communities a vision from which to build~~).

7. Collaborate (~~Delete: and~~) (~~Add: or~~) partner with indigenous, local, BIPOC, (~~Delete: and~~) (~~Add: or~~) underserved communities to develop culturally relevant, inclusive, and accessible environmental, natural resource, (~~Delete: and~~) (~~Add: or~~) outdoor recreation programs, practices, curriculum, (~~Delete: and~~) (~~Add: or~~) facilities.

Staff Suggestion:

Collaborate (~~Delete: and~~) (~~Add: or~~) partner with indigenous, local, BIPOC, (~~Delete: and~~) (~~Add: or~~) underserved communities to develop culturally relevant, inclusive, and accessible environmental, natural resource, (~~Delete: and~~) (~~Add: or natural resource-based~~) outdoor recreation programs, practices, curriculum, (~~Delete: and~~) (~~Add: or~~) facilities.

8. (~~Delete: Plan, d~~) (~~Add: D~~)esign and (~~Add: /or~~) develop culturally relevant, accessible, and resilient outdoor recreation facilities and infrastructure – including recreation areas, parks, trails, fishing piers, (~~Delete: and~~) (~~Add: or~~) shelters – that create new experiences.

Staff Suggestion:

(~~Delete: Plan, d~~) (~~Add: D~~)esign and (~~Add: /or~~) develop culturally relevant, accessible, (~~Delete: and~~) resilient (~~Add: , and environmentally friendly~~) outdoor recreation facilities and infrastructure – including recreation areas, parks, trails, fishing piers, (~~Delete: and~~) (~~Add: or~~) shelters – that create new (~~Add: natural resources-based~~) experiences.

9. Expand networks of trails, parks, (~~Delete: and~~) (~~Add: or~~) natural areas to (~~Add: protect and~~) connect green spaces seamlessly, improve accessibility and safety, and (~~Add: /or~~) encourage (~~Add: all Minnesotans~~) (~~Delete: diverse populations~~) to recreate in and engage with nature.

(~~Delete: X. Research people's interests in outdoor recreation and understand barriers to participation.~~)