



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND

M.L. 2014 LCCMR Recommendations – H.F. 1874 & S.F. 1899

SUMMARY OF ML 2014 APPROPRIATIONS BY SUBDIVISION (\$28,970,000)

SUBD. 3. Water Resources: \$4,579,000 – 13 Appropriations

- Research and analysis initiatives pertaining to wastewater treatment systems and water contaminants – including pesticides, pharmaceuticals, estrogenic compounds, nutrients, and antibiotics – in order to optimize treatment methods for improved protection of water quality and human and aquatic ecosystem health.
- Evaluation of existing land and water management practices to determine their long-term effectiveness in reducing sediment and nutrient loads, managing water flow, and protecting aquatic wildlife in order to guide and enhance future practices.
- Development and testing of methods to improve and enhance groundwater management practices.
- Assessment of the undetermined causes of exceptionally high mercury levels in certain watersheds within the state to guide further mercury reduction efforts.
- Design, installation, and monitoring of a pilot system for reusing rainwater to economically produce chilled water and help identify other potential applications for rainwater reuse systems.
- Training and technical assistance for community groups to develop and implement local water quality improvement projects.

SUBD. 4. Aquatic and Terrestrial Invasive Species: \$2,298,000 – 6 Appropriations

- Development and assessment of techniques and technologies for detecting, impeding, and managing invasive carp species, including optimizing existing dam infrastructure to act as barriers and creating systems that exploit carp physiology and behavior to control them.
- Development and implementation of a pilot locally-based, regional-scale aquatic invasive species prevention program intended to provide a model for other regions of the state.
- Surveying, monitoring, and biological control evaluation and implementation for established invasive species including emerald ash borer and brown marmorated stink bug.
- Surveying and analysis pertaining to mountain pine beetle, an invasive species not yet established in Minnesota, to understand the risks it poses to the state's forests and inform actions that can be taken should it become established in the future.

SUBD. 5. Foundational Natural Resources Data and Information: \$4,210,000 – 14 Appropriations

- Collection, analysis, mapping, and dissemination of foundational data and information pertaining to statewide land cover and population distributions of species including pollinators, birds, and native freshwater mussels.
- Development and testing of processes and systems for inventorying spring resources statewide and modernizing and making accessible public drainage records.
- Compilation and analysis of existing historical datasets on Minnesota species, ecosystems, and forest resources for comparison with recent data to identify changes, improve understanding of trends and ecological vulnerabilities, and inform future natural resource management strategies.
- Research and analysis pertaining to declining Minnesota moose populations, native butterfly species, native freshwater mussel species, and loon and pelican populations impacted by the Deepwater Horizon oil spill.
- Surveying and profiling of Minnesota plant species for a public oriented plant identification reference website.

SUBD. 6. Methods to Protect/Restore/Enhance Land, Water & Habitat: \$3,675,000 – 11 Appropriations

- Surveying, research, and analysis pertaining to pollinators and pollinator decline, including establishment of a long-term pollinator research program initiative, identification of strategies for increasing and promoting pollinator habitat, and assessment of the role of systemic pesticides in pollinator decline.
- Collection, research, and analysis efforts to promote long-term prairie sustainability.
- Development of a watershed protection plan for southeast Minnesota.
- Restoration and enhancement efforts including habitat restoration in the greater metropolitan area and demonstration and training of restoration techniques in northeastern Minnesota.
- Evaluation of a variety of novel approaches to addressing various natural resource related challenges with aims including excess nutrient capture from waterways, biofuel feedstock generation, wetland habitat management, and mineland restoration using waste reutilization.
- Expansion and enhancement of an innovative demonstration aquaponics facility.

SUBD. 7. Land Acquisition for Habitat and Recreation: \$6,923,000 – 6 Appropriations

- Protection, restoration, and improvement of priority, high quality, and unique lands and habitat within Minnesota's Scientific and Natural Area system through acquisition, restoration, and related conservation efforts involving citizen engagement.
- Expansion of outdoor recreational opportunities through acquisition of lands for parks in the Metropolitan Regional Parks System and a St. Croix river park, acquisition and development of lands for a park and a trail in southwestern Minnesota, and development of segments of the Mesabi Trail in northern Minnesota.

SUBD. 8. Air Quality, Climate Change, and Renewable Energy: \$3,360,000 – 9 Appropriations

- Research, analysis, planning, and demonstration pertaining to renewable energy production technologies involving solar, geothermal, waste product reutilization, and biofuels.
- Analysis of agricultural systems and technologies to develop strategies for reducing fossil fuel usage and increasing local energy production, particularly in rural areas.

SUBD. 9. Environmental Education: \$3,681,000 – 9 Appropriations

- Delivery of environmental education, technical assistance, and training to students, particularly youth that are under-represented in natural resource professions and outdoor participation, through a variety of mentoring, internships, action projects, and focused, place-based outdoors experiences.
- Development and delivery of environmental education to communities and schools pertaining to pollinators, wolves, raptors, and climate change, including a documentary on the potential impacts of climate change for Minnesota to be broadcast statewide on public television.

SUBD. 10. Administration and Contract Agreement Reimbursement: \$244,000 – 3 Appropriations

- ENRTF project records system upgrade and project contract agreement reimbursement by DNR.



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SUMMARY OF EXPECTED OUTCOMES ACROSS SUBDIVISIONS FOR ~\$29 MILLION

- Natural Resource Research and Analysis: ~\$13.1 million**
Research and analysis projects that will advance our knowledge about and provide strategies and recommendations for addressing issues relating to aquatic and terrestrial invasive species control; water quality and conservation; land management; wastewater treatment; species management, protection, decline, and recovery; alternative agricultural practices; waste product utilization; and renewable energy production.
- Environmental Education, Outreach, Demonstration, and Technical Assistance: ~\$5.4 million**
Environmental education, outreach, demonstration, and technical assistance efforts that will engage and educate Minnesotans on topics including aquatic invasive species, climate change, ecology, plant and wildlife species, pollinators, and habitat conservation; outreach to engage under-represented and under-served students and communities in outdoor education and natural resource professions; pilot and demonstrate options for renewable energy production and rainwater reuse; and provide training and technical assistance on water quality improvement, renewable energy and energy conservation, and natural resource conservation and management tools, practices, and options.
- Parks and Trails Acquisition and Development: ~\$4.3 million**
Acquisition of an estimated 286 acres to expand parks in the Metropolitan Regional Park System and a St. Croix river park in the metropolitan area, expand and develop a local park and a local trail in southwestern Minnesota, and design and construct segments of a regional trail in northern Minnesota.
- Natural Resource Inventory, Monitoring, Mapping, and Planning: ~\$3.6 million**
Inventory, monitoring, mapping, and planning efforts to obtain critical information and guide relevant decisions and efforts over time, including updating the statewide land cover map; completing the MN Breeding Bird Atlas; surveying for population distributions of pollinators and imperiled species; planning and development of data management systems for inventorying state spring resources and public drainage system records; collection and assembly of historic datasets of statewide forest inventories and phenology records; monitoring and evaluation of habitat restoration methods; collection and long-term storage of prairie plant seeds; planning and monitoring for the state's Scientific and Natural Areas program; local planning efforts pertaining to renewable energy, recreation, watershed protection, and invasive species management; detection and monitoring of invasive species including emerald ash borer, mountain pine beetle, and brown marmorated stink bugs.
- Terrestrial and Aquatic Habitat Restoration, Enhancement, and Improvement ~\$1.2 million**
Restoration, enhancement, and improvement activities on an estimated 1,440 acres. Activities performed will include prescribed burning, soil preparation, seeding, native vegetation installation, woody encroachment removal, invasive species control, and monitoring and evaluation.
- Terrestrial and Aquatic Habitat Acquisition: ~\$1.1 million**
Acquisition of an estimated 240 acres in fee title. Permanently protected areas will include forests, prairie, blufflands, wetlands, shorelands, and other habitat.
- Contract Agreement Reimbursement: ~\$100 thousand**
 Administering of contract agreement reimbursement for projects of non-state entities.
- Administration: ~\$100 thousand**
 Upgrade and modernization of ENRTF project records management system containing over 50 years of data on more than 1,800 appropriations representing nearly \$800 million in total appropriations and used to manage an annual average of over 250 open appropriations totaling over \$100 million in appropriations.

% OF EXPECTED OUTCOMES ACROSS SUBDIVISIONS

