



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND M.L. 2017 LCCMR Recommendations - S.F. 550 & H.F. XXX

SUMMARY OF M.L. 2017 RECOMMENDATIONS BY SUBDIVISION **(\$59,156,000 for 69 Recommendations)**

SUBD. 03 Foundational Natural Resource Data and Information: \$12,601,000 – 14 Recommendations

- Collection, analysis, mapping, and dissemination of foundational data and information pertaining to prairie and forest ecosystems, biological diversity, and groundwater mapping, including the continuation of the County Geologic Atlas and Minnesota Biological Survey.
- Research and analysis to optimize natural resource management practices and conservation strategies for protecting prairie plant diversity and wild rice through evaluation of microbial communities, ecosystem service evaluation of source water protection, and assessment of wildlife species.
- Development and implementation of tools to help guide and prioritize habitat protection and natural resource management in response to environmental change and stressors including the online wildflower identification guide, updating drainage records, landslide management tools, and an assessment of the use of unmanned aerial vehicles to monitor moose populations and natural resources.
- Development of localized planning tools and outreach assistance to communities to aid in decision making related to natural resources, infrastructure, and human health.

SUBD. 04 Water Resources: \$3,175,000 – 9 Recommendations

- Expansion and acceleration of a program to improve water quality and aquatic ecosystem health in streams and rivers through re-establishment of native mussel species.
- Research and assessment to improve understanding about household chemicals and herbicides in surface water, chemicals of emerging concern in lakes, long-term effects of oil spills on groundwater and surface waters, and increased effects of the release of mercury and sulfur from peatlands on aquatic communities.
- Research and analysis initiatives to develop or improve technologies and techniques for water quality protection including nitrogen removal in wastewater, biological monitoring in trout streams, and pathogen evaluation to maximize water reuse.
- Development of improved methodologies to estimate groundwater storage for improved water management.

SUBD. 05 Environmental Education: \$4,421,000 – 9 Recommendations

- Delivery of hands-on education, training, and mentoring of students, teachers, and community volunteers in conservation practices and environmental stewardship through various initiatives throughout the state including science based water recreational experiences, community focused workshops, scientific investigation of birds, youth watershed stewardship, protection of non-game wildlife species, and residential environmental learning center opportunities.
- Development and delivery of an interagency effort to increase diversity in students pursuing environment and natural resource careers, interactive planetarium program on water resources, and local planning for bird habitat through the implementation of the National Audubon Bird City Program.



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SUBD. 06 Aquatic and Terrestrial Invasive Species: \$4,721,000 – 6 Recommendations

- Research and analysis initiatives aimed at preventing, minimizing, and mitigating the threats and impacts posed by invasive species including expanded support for priority research and prevention efforts of the Minnesota Aquatic Invasive Species Research Center, stream barriers to remove common carp, continued monitoring of invasive Bighead and Silver carp and native fish populations.
- Implementation of innovative invasive species management efforts to continue Emerald Ash Borer biocontrol and control invasive cattails to improve bird habitat and water quality.
- Development of an interagency strategic action plan to manage terrestrial invasive species to protect and promote habitat and native species.

SUBD. 07 Air Quality, Climate Change, and Renewable Energy: \$4,738,000 – 8 Recommendations

- Research, analysis, and development of various clean energy technologies, including improved solar cell manufacturing, storage and use of solar thermal energy, generation and use of photovoltaic energy in agricultural applications including solar powered tools for weed management in agricultural fields.
- Analysis and demonstration of alternatives for meeting localized community energy needs and energy efficiency and a centralized biomass heating system supported by sustainable forest management at Camp Ripley Training Center.
- Targeted air quality monitoring and assessment in Minneapolis and St. Paul to improve understanding of the distribution of air pollutants in urban areas.

SUBD. 08 Methods to Protect or Restore Land, Water, and Habitat: \$10,808,000 – 12 Recommendations

- Research and analysis of methods for enhancing habitat for pollinators and game birds including optimizing roadside plantings and prescribed burning, development of best management practices for conservation of beneficial insects, evaluating the use of bison to restore oak savanna; and an assessment of wave energy impacts on shorelines to improve spawning habitat.
- Restoration of uplands, wetlands, and shorelands including approximately 1,932 acres of butterfly, bee, beneficial insects, and grassland bird habitat.
- Implement conservation through technical assistance to land owners with the Conservation Reserve Enhancement Program (CREP) and demonstrate a process of economic assessment of precision conservation for agriculture to assist farmers.

SUBD. 09 Land Acquisition, Habitat, and Recreation: \$17,357,000 – 9 Recommendations

- Acquisition and restoration of priority high quality lands including Scientific and Natural Area system (acquire 250 acres) and (restore 1,000 acres) of state lands, Native Prairie Bank conservation easements (335 acres) and (restore 570 acres), and acquire 45 acres of shoreline on Leech Lake in Cass County.
- Expansion of outdoor recreational opportunities including acquisition of 373 acres for state parks and trails and 197 acres for metropolitan regional parks; state trail development and enhancement in southern Minnesota and the Mesabi Trail in northern Minnesota; trailhead and water access in the City of Tower and acquisition of 29 acres by Crane Lake Township for a campground and access to Voyageurs National Park.

SUBD. 10 Administration: \$1,335,000 – 2 Recommendations

- LCCMR administration for the biennium FY 18-19 (\$600,000 each year) and DNR contract agreement for fiscal management of non-state entity reimbursements (\$135,000).