



# ENVIRONMENT AND NATURAL RESOURCES TRUST FUND

## M.L. 2016 Appropriations: Chapter 186, Section 2

### SUMMARY OF M.L. 2016 APPROPRIATIONS BY SUBDIVISION (\$37,909,000)

- SUBD. 03. Foundational Natural Resource Data and Information: \$7,958,000 – 17 Appropriations**
- Collection, analysis, mapping, and dissemination of foundational data and information pertaining to pollinators, prairie and forest ecosystems, lakes, rivers, springs, and wetlands, including the completion of a decade-long effort to update the National Wetlands Inventory for Minnesota.
  - Research and analysis to optimize natural resource management practices and conservation strategies for protecting native pollinator species, including bees and imperiled butterflies, and various other wildlife, including birds, small mammals, amphibians, fish, and elk.
  - 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 launch of a new statewide habitat monitoring network, development and piloting of a more cost-efficient forest inventory methodology, and development of tools to assess the relationships between vegetation and ground and surface water quality.
  - Research and evaluation of the risks for grassland wildlife, pollinators, butterflies, and game and non-game birds resulting from unintentional exposure to insecticides and other pesticides.
- SUBD. 04. Water Resources: \$7,799,000 – 23 Appropriations**
- Research and assessment to improve understanding about increasing instances of harmful algal blooms and inform the development of tools for predicting, tracking, and mitigating impacts of harmful algal bloom events.
  - 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 analysis initiatives to develop or improve technologies, materials, and techniques for treating or removing a variety of pollutants – including salts, metals, sulfates, pesticides, pharmaceuticals, and excess nutrients – from wastewater, stormwater, agricultural runoff, groundwater, and other polluted water bodies in order to ensure drinking water supply safety and protect aquatic species and water quality.
  - Development of various new technologies and methodologies to improve understandings about ground and surface water quality, supply, storage, and flow to inform drinking water protection and management strategies.
  - Assessments of the presence, flow, and interaction of bacteria and contaminants – including salts and insecticides – within natural environments to understand impacts on the health of soil and aquatic ecosystems.
  - Testing, monitoring, and assessment to quantify and improve agricultural and urban hydrology management practices and related water quality treatment options aimed at reducing soil erosion, improving peak water flow management, and decreasing bacteria and nutrient loading.
  - Outreach and coordination of partnership efforts involving citizens and agencies within watersheds to identify and promote implementation of pollution reduction strategies and conservation practices to improve water quality.
- SUBD. 05. Environmental Education: \$2,312,000 – 9 Appropriations**
- 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 internships with soil and water conservation districts, service learning at school forests, youth-led community sustainability projects, expansion of the Master Water Steward Program, and classroom learning on topics including habitat and species conservation, water quality, and Dakota Indian environmental principles.
  - Development and delivery of a statewide initiative involving interrelated public forums, educational videos, and broadcast television programs focused on outdoor recreation, conservation, and natural resource issues.
- SUBD. 06. Aquatic and Terrestrial Invasive Species: \$5,860,000 – 7 Appropriations**
- Research and analysis initiatives aimed at preventing, minimizing, and mitigating the threats and impacts posed by invasive species, including expanded support for priority efforts of the Minnesota Invasive Terrestrial Plants and Pests Center, development and evaluation of ballast water treatment systems, evaluation of biocontrol agents for white nose syndrome in bats, and continued evaluation and propagation of Dutch elm disease resistant trees.
  - Implementation of innovative invasive species management efforts, including localized targeting of emergent terrestrial invasive species to halt spread and demonstration of carp control techniques at a sub-watershed scale.
- SUBD. 07. Air Quality, Climate Change, and Renewable Energy: \$2,090,000 – 5 Appropriations**
- Research, analysis, and development of various clean energy technologies and strategies, including thermoelectric energy generation from waste heat, integration of solar energy and wastewater recycling into agricultural facilities, and hydrogen fuel generation from wind power
  - Analysis and demonstration of alternatives for meeting localized community energy needs, particularly in low-income areas, through strategies including solar gardens and energy efficiency.
- SUBD. 08. Methods to Protect, Restore, and Enhance Land, Water, and Habitat: \$4,515,000 – 9 Appropriations**
- Research and analysis of methods for enhancing habitat for pollinators and game birds, including innovative uses of supplementary plantings in urban and agricultural landscapes, improved restoration practices based on how prairie fragments interact, strategies for prescribed burning to maximize habitat benefit, techniques to restore floodplain forests impacted by reed canary grass, and modified approaches to forest management to protect water quality.
  - Restoration of uplands, wetlands, and shorelands in the greater metropolitan area and blufflands near Winona.
- SUBD. 09. Land Acquisition, Habitat, and Recreation: \$7,165,000 – 7 Appropriations**
- Protection and restoration of priority, high quality, and/or unique lands, including 750 acres restored within Minnesota's Scientific and Natural Area system, 500 acres protected by conservation easements in Stearns County, and 200 acres acquired and restored for wellhead protection within the Lincoln Pipestone Rural Water System.
  - Expansion of outdoor recreational opportunities through construction and development of the Mesabi Trail, including a trail connection to Tower, and acquisition of 16 acres for a recreational trail and park in Fergus Falls.
- SUBD. 10. Administration: \$210,000 – 2 Appropriations**
- ENRTF project records system upgrade and project contract agreement reimbursement for non-state entities.



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### SUMMARY OF EXPECTED OUTCOMES ACROSS SUBDIVISIONS FOR ~\$37.9 MILLION

- **Natural Resource Research and Analysis: ~\$15.8 million**  
*Research and analysis* efforts that will advance our knowledge about and provide strategies and recommendations for addressing issues relating to terrestrial and aquatic invasive species prevention, control, and mitigation; habitat monitoring and conservation; pollinator, plant, and animal species conservation, management, breeding, and reintroduction; habitat restoration practices; improvement of agricultural and forestry practices; clean energy technologies and strategies; climate change impacts and projections; effects of pesticide and insecticide exposure on wildlife and ecosystems; surface and ground water resources protection and sustainability; harmful algae blooms; drinking water and wastewater treatment; and technologies and processes for preventing and removing water contaminants.
- **Natural Resource Inventory, Monitoring, Mapping, and Planning: ~\$7.6 million**  
*Inventory, monitoring, mapping, and planning* efforts to obtain critical information and guide relevant decisions and efforts over time, including completion of the National Wetlands Inventory update for Minnesota; acceleration of a state spring inventory; surveying and monitoring for population distributions of pollinators, mussels, invasive species, and various wildlife; assessments of surface and ground water hydrological processes; implementation of a statewide habitat monitoring network; surveying, monitoring, and modeling of aquatic ecosystems; data collection and planning for the development of a new forest inventory methodology; inventory, assessment, monitoring, and mapping efforts pertaining to stormwater management, agriculture, and forestry practices; inventories of microbes found in ballast water and bacteria found in groundwater; monitoring and mapping of groundwater flow; and planning efforts for potential elk reintroductions, habitat restoration and stewardship, and clean energy investment.
- **Environmental Education, Outreach, Demonstration, and Technical Assistance: ~\$4.7 million**  
*Environmental education, outreach, demonstration, and technical assistance* efforts that will engage and educate Minnesotans on topics including ecology, pollinators, plant and wildlife species, invasive species, harmful algae blooms, environmental stewardship and resource sustainability, lead ammunition alternative options, water resources, outdoor recreation, climate change, and habitat protection and restoration; *demonstrate* options for water quality protection practices, water treatment technologies, invasive carp management, alternative agricultural and horticultural practices, and clean energy; and *provide training and technical assistance* on utilizing new natural resource tools and datasets, pollution reduction and wastewater treatment practices, invasive species identification and reporting, and natural resource conservation and management practices and options.
- **Terrestrial and Aquatic Habitat Restoration, Enhancement, and Improvement ~\$4.0 million**  
*Restoration, enhancement, and improvement* activities on an estimated 1,216 acres, including 2.61 miles of shoreline; 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: ~\$3.2 million**  
*Acquisition* of an estimated 710 acres in a combination of fee title (210 acres, including 0.2 miles of shoreline) and conservation easements (500 acres); permanently protected areas will include forests, prairies, grasslands, wetlands, shorelands, and other habitat.
- **Parks and Trails Acquisition and Development: ~\$2.5 million**  
*Acquisition* of an estimated 17 acres to create a new trail and park in the City of Fergus Falls; *design and construction* of trails in northern Minnesota, including a six mile segment of the Mesabi Trail and a local trail connection to the Mesabi Trail and new kayak route near the City of Tower.
- **Contract Agreement Reimbursement: \$135,000**  
 Administering of contract agreement reimbursement for projects of non-state entities.
- **LCCMR Administration Grants Management System: \$75,000**  
 To upgrade and modernize the LCCMR project records system and grants management processes.

### % OF EXPECTED OUTCOMES ACROSS SUBDIVISIONS

