

**M.L. 2024 Environment and Natural Resources Trust Fund (ENRTF)
LCCMR Recommendations for FY 2025**

For FY 2025 (July 1, 2024 -June 30, 2025), approximately \$79 million is available for funding from the Environment and Natural Resources Trust Fund (ENRTF).

As of July 20, 2023, the Legislative-Citizen Commission on Minnesota Resources (LCCMR) has selected 101 projects totaling \$79,644,000 to recommend to the 2024 Minnesota Legislature for funding from the ENRTF. In response to LCCMR's 2024 Request for Proposal (RFP), 218 proposals requesting a total of approximately \$174 million were received and considered through a competitive, multi-stage evaluation. The following recommendations range from funding the full proposal and dollar amount requested to partial funding for specific proposal elements.

Check the LCCMR meeting schedule for the most up-to-date information and important process dates.

Topic Area	\$ Recommended	Percentage of Total Recommendation
Subd. 03 Foundational Natural Resource Data and Information 28 Recommendations	\$14,993,000	18.83%
Subd. 04 Water Resources 13 Recommendations	\$6,924,000	8.69%
Subd. 05 Environmental Education 22 Recommendations	\$11,262,000	14.14%
Subd. 06 Aquatic and Terrestrial Invasive Species 4 Recommendations	\$8,304,000	10.43%
Subd. 07 Air Quality, Climate Change, and Renewable Energy 5 Recommendations	\$4,833,000	6.07%
Subd. 08 Methods to Protect or Restore Land, Water, and Habitat 16 Recommendations	\$10,910,000	13.70%
Subd. 09 Land Acquisition, Habitat, and Recreation 10 Recommendations	\$20,322,000	25.52%
Subd. 10 Administration, Emerging Issues, and Contract Agreement Reimbursement 4 Recommendations	\$2,096,000	2.63%
Total Recommendations	\$79,644,000	100.00%

Fund Source	\$ Amount
FY 2025 - Environment and Natural Resources Trust Fund (ENRTF)	\$79,644,000
Total \$	\$79,644,000

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Subd.	Proposal ID	Title	LCCMR Total Recommended Amount (FY25)	Summary	Organization	Project Manager	Region*
Subd. 03 Foundational Natural Resource Data and Information (28 Recommendations = \$14,993,000)							
03a	2024-014	Native Plant Community Data in City of Duluth	\$198,000	Develop Native Plant Community data and maps for the City of Duluth and St. Louis River estuary to support conservation and restoration activities.	Minnesota Land Trust	Virginia Breidenbach	NE
03b	2024-036	Reconstructing Historical Wild Rice to Understand Its Future	\$200,000	We will characterize environmental drivers contributing to the decline of wild rice using lake sediment cores to reconstruct historical wild rice abundance in relation to lake and watershed stressors.	Science Museum of Minnesota, St. Croix Watershed Research Station	Lienne Sethna	Statewide
03c	2024-044	Characterizing Tree Cavities and Use by Minnesota's Wildlife	\$349,000	Pileated Woodpeckers are keystone habitat modifiers that support an array of game, non-game, and conservation concern species. Additional information is needed to understand cavity dynamics for these species.	U of MN, Duluth - NRRI	Alexis Grinde	Statewide
03d	2024-046	Fate of Minnesota's Lakes in the Next Century	\$453,000	This proposal aims to answer this question: How would the water quality of Minnesota's lakes change in the next century under future scenarios of urbanization, agricultural growth, and climate change?	U of MN, College of Science and Engineering	Ardeshir Ebtehaj	Statewide
03e	2024-048	Turtle Island Skywatchers – Minnesota Research and Data Visualization	\$200,000	Turtle Island Skywatchers - Innovative Research and Data Visualization project works to protect Minnesota water, wildlife, and natural resources while empowering Indigenous youth as leaders and all citizens as researchers.	Native Skywatchers Inc	Annette S. Lee	Statewide
03f	2024-063	Monitoring Minnesota's Insects: Connecting Habitat to Insect Prey	\$199,000	The protection of insect-feeding animals is reliant on sustained insect abundance. We will investigate the ecological roles and energy transfer by Minnesota insects and train future insect researchers.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Matthew Petersen	Central, NW
03g	2024-068	Determining Ambient Background PFAS Concentrations in Minnesota Soils	\$621,000	This project determines ambient background per- and polyfluoroalkyl substance (PFAS) levels in urban and non-urban soils. This information will help Minnesota develop management strategies for PFAS contaminated soils.	Minnesota Pollution Control Agency	Sona Psarska	Statewide
03h	2024-071	Investigating Life History Characteristics of Minnesota Elk	\$933,000	We will assess movements, survival, and causes of mortality of Minnesota elk while developing a non-invasive, safer method to estimate population size. This information is important for long-term management efforts.	MN DNR, Fish and Wildlife Division	Eric Michel	Statewide
03i	2024-072	Foundational Data for Moth and Butterfly Conservation	\$195,000	This project will build the first comprehensive list of Minnesota moths and butterflies. Information gained through surveys and outreach efforts will inform land managers and inspire public appreciation.	MN DNR, Ecological and Water Resources Division	Kyle Johnson	Statewide
03j	2024-078	DNR County Groundwater Atlas	\$3,200,000	This project supports continuing development of the County Groundwater Atlases for approximately two years. The goal is to provide this valuable water and resource management "information infrastructure" to every county.	MN DNR, Ecological and Water Resources Division	Paul Putzier	Statewide
03k	2024-083	Voyageurs Wolf Project - Phase III	\$996,000	Wolf survival and predation in summer are almost unknown but critical to deer, moose, and wolf, management. We'll study wolf predator-prey ecology, share charismatic natural history, and promote Voyageurs' region.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Joseph Bump	Statewide
03l	2024-088	Distribution and Population Status of Weasels in Minnesota	\$400,000	We will determine the distribution, relative density, and spatial occupancy patterns of 3 small weasel species in Minnesota to fill key knowledge gaps in weasel distribution and status in Minnesota.	U of MN, Duluth - NRRI	Michael Joyce	Statewide

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03m	2024-150	Improving Aquatic Plant Knowledge for Healthy Waters	\$198,000	Enhance knowledge of Minnesota's native aquatic plant biodiversity, the backbone of healthy aquatic systems, by delivering data products that support conservation, protection and management for decision-makers and scientists.	MN DNR, Ecological and Water Resources Division	Holly Bernardo	Statewide
03n	2024-158	New Small Mammal Monitoring Methods for Minnesota	\$199,000	We will develop camera trapping methods for small mammals, a new tool in the toolbox to to fill key knowledge gaps in status of Minnesota mammal species.	U of MN, Duluth - NRRI	Ron Moen	Statewide
03o	2024-163	Status of Bats and Roost Trees after White-Nose	\$195,000	We will deploy acoustic detectors and revisit roost trees identified in our previous ENRTF project to measure effect of seven years of white-nose syndrome on Minnesota bats.	U of MN, Duluth - NRRI	Ron Moen	Statewide
03p	2024-172	Sublethal Effects of Pesticides on Invertebrate Community	\$387,000	This project seeks to provide data on pesticide contamination in soil, water and the insect community across the state and the effect of exposure to insecticide exposure on insect reproduction.	U of MN, College of Biological Sciences	Mingzi Xu	Statewide
03q	2024-186	Modernizing Minnesota's Plant Community Classification and Field Guides	\$1,800,000	Update the state's 20-year-old native plant community classification guides to incorporate new data; streamline user application and access to products; and increase connections to evolving climate and vegetation trends.	MN DNR, Ecological and Water Resources Division	Bruce Carlson	Statewide
03r	2024-192	Assessing Prairie Health to Inform Pollinator Conservation	\$297,000	We will assess the environmental quality of prairies across Minnesota. On-the-ground surveys and contaminant risk assessments will help inform partner management actions, endangered species recovery plans, and pollinator reintroduction efforts.	Minnesota Zoological Society	Erik Runquist	Statewide
03s	2024-193	Understanding Native Fishes in the Bowfishing Era	\$588,000	Minnesotans increasingly value native fishes. For example, >95% of bowfished species in MN are native, yet all are poorly understood. Foundational natural resource data is absolutely necessary for all stakeholders.	U of MN, Duluth	Alec Lackmann	Statewide
03t	2024-206	Preserving Minnesota Wildflower Information	\$199,000	We propose to integrate Minnesota Wildflowers Information, an online tool for plant identification, with the Minnesota Biodiversity Atlas, to preserve and extend this popular ENRTF-supported resource for future use.	U of MN, Bell Museum of Natural History	Ya Yang	Statewide
03u	2024-215	White-Tailed Deer Movement and Disease in Suburban Areas	\$699,000	Our project aims to better understand white-tailed deer movement, habitat use, and disease dynamics at the suburban/agricultural interface to inform more efficient deer management and disease control.	U of MN, College of Biological Sciences	Meggan Craft	Statewide
03v	2024-222	Highly Pathogenic Avian Influenza and Minnesota Raptors	\$187,000	Evaluation of Minnesota raptors, in rehabilitation and free ranging settings, for current or previous exposure to highly pathogenic avian influenza virus to better understand outbreak impacts to raptor populations.	U of MN, Raptor Center	Victoria Hall	Statewide
03w	2024-223	Geologic Atlases for Water Resource Management	\$1,236,000	Geologic atlases provide maps/databases essential for improved management of ground and surface water. This proposal will complete current projects and start new projects to equal about 4 complete atlases.	U of MN, MN Geological Survey	Barbara Lusardi	Statewide
03x	2024-224	Remote Sensing for Pollinator Habitat	\$180,000	This project uses remote sensing technology (UAVs) to evaluate pollinator habitat on energy and transportation lands across Minnesota.	Monarch Joint Venture	Wendy Caldwell	Statewide

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03y	2024-247	Harnessing Cover Crops and Roots for Sustainable Cropping	\$375,000	This project proposes to increase the adoption of cover cropping in southern Minnesota to address issues of loss of diversity and environmental degradation. By generating important information on cover crops.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Axel Garcia y Garcia	SW
03z	2024-251	Effects of Conservation Grazing on Solar Pollinator Habitat	\$88,000	This research will analyze the effects of sheep grazing and mowing on the vegetation of solar sites that have been managed for pollinator habitat.	Minnesota Native Landscapes	Daniel Tix	Central, Metro
03aa	2024-278	Genetic Detection of Endangered Mussels in the Mississippi	\$241,000	This project will create and optimize eDNA assays to detect the presence of 8 endangered or threatened mussel species around Buffalo Slough near Prairie Island Indian Community.	US Geological Survey, Ohio Water Microbiology Lab	Lauren Lynch	Statewide
03bb	2024-296	Integrated Population Modeling for Trumpeter Swans	\$180,000	We will compile all available data for Minnesota Trumpeter Swans and use these sources to model historical population abundance and predict future population dynamics.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Todd Arnold	Statewide
		SubTotal	\$14,993,000				
Subd. 04 Water Resources (13 Recommendations = \$6,924,000)							
04a	2024-037	Hyperspectral Characterization of Toxic Harmful Algal Blooms	\$399,000	The project will investigate why, when, and where different species of harmful algal blooms release toxins into the water using hyperspectral microscopic imaging towards developing early warning remote sensing tools.	U of MN, St. Anthony Falls Laboratory	Ardeshir Ebtehaj	Statewide
04b	2024-057	Characterization of Chemicals in Structural Fire Wastewater	\$369,000	The wastewater from extinguishing structural fires will be analyzed to identify and characterize chemicals present and better understand potential toxicity to humans and water systems.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Grace Wilson	Statewide
04c	2024-061	Climate Change and Management Effects on Lake Methane	\$540,000	Rising temperatures and increased precipitation contribute to decreased oxygen and increased methane in Minnesota lakes and wetlands. We will identify impacts on water quality and methane emissions, providing management guidance.	U of MN, College of Biological Sciences	James Cotner	Statewide
04d	2024-073	Enhancing Wastewater Treatment while Bioprospecting for Novel Pharmaceuticals	\$553,000	We will generate genome sequences of bacteria growing in wastewater treatment bioreactors, allowing us to improve phosphorus and nitrogen removal from wastewater in Minnesota and to discover novel pharmaceutical compounds.	U of MN, College of Science and Engineering	Timothy LaPara	Statewide
04e	2024-077	Improving Water Efficiency Programming with Measurable Outcomes	\$200,000	The project will accelerate the implementation of three water efficiency programs that are estimated to save 79 million gallons of water annually and serve as an example for other communities.	City of Woodbury	Heidi Quinn	Metro
04f	2024-086	Fluorine Beyond PFAS: Pesticide and Pharmaceutical Degradation	\$400,000	The project will assess the fluorinated breakdown products produced from pesticides and pharmaceuticals to identify potentially persistent or toxic byproducts and allow development of sustainable chemistries.	U of MN, College of Science and Engineering	William Arnold	Statewide
04g	2024-161	Novel Nutrient Recovery Process from Wastewater Treatment Plants	\$486,000	This proposal requests renewed funding for a new integrated process with potential to promote nutrient removal/recovery and renewable energy production at rural municipal and industrial wastewater treatment plants (WWTP).	U of MN, College of Food, Agricultural and Natural Resource Sciences	Bo Hu	Statewide
04h	2024-164	Visitor Perceptions of Lake Water Quality	\$379,000	Use mobile AI-assisted technologies to survey lake visitors. Assess perceptions of water quality and perceived threats. Combine survey data with water quality trend monitoring to inform lake management.	U of MN, Humphrey School of Public Affairs	Bonnie Keeler	Statewide

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04i	2024-173	Wildfire Impacts on Mercury Cycling in Wilderness Lakes	\$297,000	Increasing wildfires in Minnesota are mobilizing mercury and degrading water in wilderness lakes, potentially causing increased mercury concentrations in fish. We will develop approaches to protect our lakes and fish.	U of MN, Duluth - NRRRI	Christopher Filstrup	Statewide
04j	2024-213	Flood and Drought Prediction for Minnesota	\$499,000	This project will analyze existing and projected data to develop simple tools to predict the effect of land use and climate change on extreme floods and droughts.	U of MN, College of Food, Agricultural and Natural Resource Sciences	John Nieber	Statewide
04k	2024-257	Breaking the PFAS Cycle with a Full-Scale Demonstration	\$1,481,000	This full-scale pilot will evaluate supercritical water oxidation (SCWO) for managing PFAS in biosolids and water treatment residuals. SCWO can destroy PFAS in a variety of wastes and recover energy.	Barr Engineering Co.	Andrew McCabe	Statewide
04l	2024-269	Are Stream Restoration Efforts Effective? An Evidence-Based Assessment.	\$200,000	Assessing stream habitat improvement projects to improve trout populations and stream health in the Driftless Area.	Saint Mary's University	Andrew Robertson	Statewide
04m	2024-279	Uncovering the Past to Protect Minnesota's Walleye Fisheries	\$1,121,000	We will reconstruct historical lake conditions to identify factors linked to successful walleye fisheries and guide effective management in the face of warming temperatures, invasive species, and nutrient loading.	Science Museum of Minnesota, St. Croix Watershed Research Station	Adam Heathcote	Statewide
		SubTotal	\$6,924,000				
Subd. 05 Environmental Education (22 Recommendations = \$11,262,000)							
05a	2024-015	Jay C. Hormel Nature Center Supplemental Teaching Staff	\$410,000	This project sustains momentum from the pilot project funded previously by the ENRTF for growing environmental education opportunities for learners from outside of Austin.	City of Austin	Luke Reese	SE
05b	2024-017	Connecting Communities to Voyageurs Classroom & Minnesota's National Park	\$994,000	Voyageurs Conservancy will connect 17,000 Minnesotans to the state's only national park through standards-aligned K-12 education, career-building fellowships, and enhanced programs that engage diverse audiences in the park's conservation.	Voyageurs Conservancy	Christina Hausman Rhode	Statewide
05c	2024-023	Supporting Minnesota Teachers Implement Culturally Sustaining Environmental Education	\$295,000	To support teachers in addressing new science standards, we propose a series of workshops across Minnesota facilitating conversation about sustainability and water conservation, specifically integrating western science and Indigenous perspectives.	U of MN, College of Biological Sciences	Seth Thompson	Statewide
05d	2024-027	Phenology Investigations in Minnesota Schools	\$392,000	Provide professional development workshops at three Greater Minnesota locations for 60 teachers to use phenology education curriculum and community science resources, reaching >7,000 students in the first three years.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Robert Blair	Statewide
05e	2024-028	Get the Lead Out: Lead-Free Fishing Tackle Education	\$254,000	Get the Lead Out is focused on protecting common loons and wildlife through education and outreach about the danger of lead fishing tackle and promoting lead-free tackle alternatives.	Minnesota Pollution Control Agency	Kelly Amoth	Statewide
05f	2024-058	Water Science and Policy Fellowships for Minnesota	\$407,000	Minnesota Sea Grant seeks to create a science-policy fellowship program to train Minnesota's science-policy workforce and advance Minnesota's water resource policy, emulating Sea Grant's successful federal-level fellowship program.	U of MN, Duluth - Sea Grant	Alexander Frie	Statewide
05g	2024-059	Mentoring Next Generation of Conservation Professionals Phase 2	\$793,000	Internships and apprenticeships on the Minnesota Valley National Wildlife Refuge will introduce 37 diverse young people to careers in the conservation field.	Minnesota Valley National Wildlife Refuge Trust Inc	Deborah Loon	Statewide

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05h	2024-091	Restoring Land, Reviving Heritage: Indigenous Conservation-Phase Two	\$688,000	This project will restore healthy ecosystems and Indigenous cultural practices. Through expanded programming for preK-12th grade, urban Native students and families will reestablish enduring connections to land and culture.	Belwin Conservancy	Hannah Smith	Metro
05i	2024-099	Unlocking Minnesota Wilderness for Youth	\$705,000	Our goals are to engage 100,000 underserved youth statewide in environmental education, engaging them in the conservation and preservation of Minnesota wilderness through the experiences in the outdoors.	YMCA of the North	Beth Becker	Statewide
05j	2024-100	Outdoor Pathways to Environmental Education, Recreation, and Careers	\$1,500,000	Wilderness Inquiry engages 20,000 Minnesotans through outdoor adventures, promoting equity in access to outdoor activities, places, and careers and supporting stewardship and conservation values for current and future generations.	Wilderness Inquiry	Meg Krueger	Statewide
05k	2024-111	Increasing Access to Environmental Education Youth Camps	\$163,000	Osprey Wilds Environmental Learning Center will provide meaningful, hands-on environmental education learning opportunities to underserved rural and metro area children through our day-use and residential summer camps.	Osprey Wilds Environmental Learning Center	Bryan Wood	Statewide
05l	2024-115	Launching Environmental Education at Shepard Farm	\$639,000	Dodge Nature Center will build environmental skills and increase knowledge for 10,000 Minnesota K-6 youth through standards-aligned, outdoor experiences and hands-on learning at our new Shepard Farm property.	Dodge Nature Center	Pete Cleary	Metro
05m	2024-129	YES! Students Step Up To Reduce Carbon Footprint	\$199,000	YES! (Youth Eco Solutions) will empower Minnesota youth to reduce their carbon footprints by losing 5,000 pounds of CO2 per YES! team each school year.	Prairie Woods Environmental Learning Center	Kalley Pratt	Statewide
05n	2024-139	The Boundary Waters is Our Backyard	\$500,000	Connecting students from Northeastern Minnesota, especially Ely and Cook County schools, to the Boundary Waters Canoe Area Wilderness through grade-wide day trips and overnight wilderness experiences during the school year.	Friends of the Boundary Waters Wilderness	Alison Nyenhuis	NE
05o	2024-168	Season Watch: Cultivating Young Naturalists with Phenology Education	\$180,000	This education project will continue building the next generation of conservationists in Minnesota by engaging youths and adults in science and outdoor learning through radio, podcasts, newsletters and schoolyard exploration.	Northern Community Radio, Inc.	Sarah Bignall	Statewide
05p	2024-177	Rural MN Mobile Lab: Environmental/Earth Science Education	\$459,000	The CREST team wants to create a mobile lab with innovative, engaging educational activities that would be used to travel to underserved, underrepresented schools and community events in Northwest Minnesota.	U of MN, Crookston	Timothy Dudley	Statewide
05q	2024-188	Increasing Accessibility of Environmental Education at Deep Portage	\$228,000	To enhance the accessibility of environmental education and outdoor recreation at Deep Portage Learning Center through projects that provide opportunities and support independence for physically disabled students visiting the campus.	Deep Portage Learning Center	Lindsay Bjorklund	Statewide
05r	2024-200	College-School Collaboration to Promote Environmental Career Paths	\$174,000	This project builds partnerships among natural resource professionals, college, middle and high schools to work collaboratively to increase youth exposure to outdoor experiences, environmental issues, and natural resource career paths.	Minnesota State Colleges and Universities, Minnesota State University Mankato	Kimberly Musser	Statewide
05s	2024-250	Water Quality and Robots: Experientially Educating Minnesotan Youth	\$353,000	We propose educational activities for middle school youth on water quality in Minnesota. Youth will gain skills for measuring water quality and communicating results through group study and hands-on projects.	U of MN, College of Science and Engineering	Nikolaos Papanikolopoulos	Statewide

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05t	2024-272	Expanding Youth and Family Fishing Opportunities	\$1,162,000	Expand fishing opportunities in urban areas, teach more kids and families how to fish, and inventory and inform the public about safe and legal shore fishing sites throughout Minnesota.	MN DNR, Fish and Wildlife Division	Brian Nerbonne	Statewide
05u	2024-273	Youth Conservation Empowerment Project	\$70,000	UMN Extension Center for Youth Development will partner with Winona and Rochester ALCs to engage 40 youth in year-long activities that connect, engage, and empower youth as environmental change-agents.	U of MN, Extension Center for Youth Development	Nicole Pokorney	SE
05v	2024-292	North Minneapolis Nature Connection: Storytelling and Leadership Pathways	\$697,000	Loppet and community collaborators will promote urban nature connection for North Minneapolis residents through storytelling, nature and environmental justice programming, and environmental leadership pathways for high schoolers and young adults.	The Loppet Foundation	DeAnna Perkins	Metro
		SubTotal	\$11,262,000				
Subd. 06 Aquatic and Terrestrial Invasive Species (4 Recommendations = \$8,304,000)							
06a	2024-089	Minnesota Invasive Terrestrial Plants and Pests Center, 6	\$7,000,000	The Minnesota Invasive Terrestrial Plants and Pests Center (MITPPC) requests \$7 million to fund up to 15 new, high-priority applied TIS research projects to improve Minnesota's natural and agricultural resources.	U of MN, MITPPC	Robert Venette	Statewide
06b	2024-097	Mitigating the Spread of Invasive Jumping Worms	\$470,000	Jumping worms are an invasive, exotic that poses a threat to forests by removing soil organic matter and seedlings. It is necessary to develop IPM tactics for mitigating jumping worms.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Vera Krischik	Statewide
06c	2024-114	Implementing Innovative Techniques to Manage Low-Density Invasive Carp	\$634,000	This project will enhance the current program, integrating new invasive carp control and detection methods to monitor and remove invasive carp to avoid establishment in Minnesota.	MN DNR, Fish and Wildlife Division	Brian Nerbonne	Statewide
06d	2024-198	Early Detection of Invasive Viruses in Native Pollinators	\$200,000	Forewarned is Forearmed: Our goal is to protect the newly described MN DNR native bees from invasive virus-derived diseases and population declines.	U of MN, College of Veterinary Medicine	Declan Schroeder	Statewide
		SubTotal	\$8,304,000				
Subd. 07 Air Quality, Climate Change, and Renewable Energy (5 Recommendations = \$4,833,000)							
07a	2024-039	Minimizing Minnesota's Landfill Problem by Expanding Waste Diversion	\$2,318,000	Expanding waste diversion practices across the state this project will: create 16 jobs, reduce greenhouse gas emissions, provide data to measure the social, economic, and environmental benefits of waste diversion.	Better Futures Minnesota	Jason Allen	Statewide
07b	2024-049	Building Resilient Urban Forests for Climate Change	\$752,000	We will partner with urban municipalities and school districts to support planting of climate-resilient tree species. Activities include planting trees, gravel bed nursery creation, tree assessment and mapping, and community.	Great River Greening	Todd Rexine	Central, Metro, SW
07c	2024-076	Improving Agricultural Ecosystems through Autonomous Weed Control	\$978,000	Autonomous robots, powered by green hydrogen and solar power, designed to remove weeds in row crop fields can improve agricultural ecosystems with reduced herbicide application and fossil fuel use.	U of MN, WCROC	Eric Buchanan	Statewide
07d	2024-098	Advanced Biofilter for N2O Removal	\$325,000	This project will develop innovative and low-cost biofilters to decrease the concentration of nitrous oxide (N2O), a strong greenhouse gas and ozone layer destructor.	U of MN, College of Biological Sciences	Satoshi Ishii	Statewide

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07e	2024-153	Managing Future Floods and Droughts in Minnesota	\$460,000	Leveraging new statewide climate data, we will assess future change in the duration, frequency and magnitude of heavy precipitation and drought events and engage communities to prepare for these extremes.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Heidi Roop	Statewide
		SubTotal	\$4,833,000				
Subd. 08 Methods to Protect or Restore Land, Water, and Habitat (16 Recommendations = \$10,910,000)							
08a	2024-005	Long-Term Preservation of Minnesota's Ball Cactus Population	\$100,000	A long-term project to protect Minnesota's only population of ball cactus has begun successfully. To cement this success, population expansion/establishment will finish and long-term volunteer monitors will be trained.	U of MN, Landscape Arboretum	David Remucal	SW
08b	2024-022	Morrison County Historical Society Streambank Stabilization and Restoration	\$519,000	Construction funding is needed to stabilize a unique shoreline site using a bioengineered design incorporating native plants soil wraps, stream barbs and root wads to create aquatic habitat.	Morrison Soil and Water Conservation District	Shannon Wettstein	Central
08c	2024-045	Can Increased Tree Diversity Increase Community Diversity?	\$415,000	While aspen is one of the most dominant forest types, predicted future conditions will negatively impact aspen growth. Increasing tree diversity can provide increase ecological and economic resilience.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Marcella Windmuller-Campione	Central, NE, NW
08d	2024-090	Restoration of Riverside Park	\$141,000	Project will mitigate the effects of climate change by restoring water retentive capabilities to 7 acres on the Long Prairie River while also creating both recreational and educational opportunities.	City of Long Prairie	Ted Gray	Central
08e	2024-096	Pollinator Central 4: Habitat Improvement with Public Engagement	\$698,000	Continuing pollinator habitat creation and enhancement on 11 sites from Lakeville to St. Cloud, with public engagement and education centered on youth, schools, and community awareness of natural resource stewardship.	Great River Greening	Rebecca Tucker	Central, Metro
08f	2024-103	Conservation Grazing for Birds, Beef, and Better Soil	\$342,000	Assessing Audubon Conservation Ranching as a strategic approach to biodiversity conservation and grassland soils and vegetation ecosystem resilience.	Audubon Minnesota	Dale Gentry	Statewide
08g	2024-108	Minnesota Microbes for Enhanced Biodegradation of Microplastics	\$524,000	We will investigate the potential of natural microbes indigenous to Minnesota to biodegrade conventional plastics in the environment as a means for cleaning contaminated soils and waters across the state.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Brett Barney	Statewide
08h	2024-170	Completing the Mississippi River Greenway: Dakota County	\$657,000	Restore and enhance 54 acres of natural areas, five miles of linear natural signature plantings and install seven EV charging stations along the 27 mile Mississippi River Greenway.	Dakota County	Tom Lewanski	Metro
08i	2024-175	Enabling Nature to Destroy Environmental PFAS Contaminants	\$378,000	Low-levels of perfluoroalkyl substances (PFAS) contaminate water and soil in Minnesota. We propose to identify enzymes and microbes that break down PFAS, making them non-toxic.	U of MN, College of Biological Sciences	Romas Kazlauskas	Statewide
08j	2024-185	Bioacoustics for Species Monitoring and Conservation Phase II	\$568,000	This study will leverage our current bioacoustics monitoring framework to assess avian diversity at the statewide scale through a citizen science acoustic monitoring program, with a focus on private lands.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Elena West	Statewide
08k	2024-189	Preventing PFAS and Microplastics Contaminants across Minnesota	\$656,000	This project helps Minnesota entities that directly or indirectly cause PFAS and microplastics contamination stop the flow of the contaminants by developing strategies to manage solid waste streams.	U of MN, College of Food, Agricultural and Natural Resource Sciences	Roger Ruan	Statewide

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08l	2024-227	Shingle Creek Aquatic and Shoreline Habitat Enhancement	\$1,100,000	This request will transform 1.6 miles of Shingle Creek in north Minneapolis into a functioning ecological corridor, leveraging an additional \$3.27 million in planned recreational improvements.	Minneapolis Park and Recreation Board	Adam Arvidson	Metro
08m	2024-237	LiDAR Technology Preventing Wildlife Fatalities from Wind Turbines	\$525,000	Create a low-cost and advanced LiDAR package to detect and prevent wildlife collisions with wind turbines, safeguarding bats, birds, and other wildlife from fatal accidents.	U of MN, College of Science and Engineering	Sayan Biswas	Statewide
08n	2024-255	Road Salt Pollution of Surface Waters from Groundwater	\$622,000	We propose identifying hot spots of groundwater chloride pollution of surface waters due to excessive road salt use, which is a long term source increasing chloride impairment of surface waters.	U of MN, College of Science and Engineering	John Gulliver	Statewide
08o	2024-277	Growing the Minnesota Bison Conservation Herd	\$1,775,000	Design and construct fencing and handling facility needed to reintroduce bison to Camden State Park as part of preserving and interpreting the population and genome of American Plains bison.	MN DNR, State Parks and Trails Division	Edward Quinn	Statewide
08p	2024-298	Priority Lakes: Meeting Protection Goals and Multiplying Benefits	\$1,890,000	Use existing tools and partnerships to meet protection goals and transition to long-term community driven, coordinated management for multiple benefits, including: habitat, water, forest health, local economy and climate resiliency.	Hubbard County Soil & Water Conservation District	Crystal Mathisrud	Central
		SubTotal	\$10,910,000				
Subd. 09 Land Acquisition, Habitat, and Recreation (10 Recommendations = \$20,322,000)							
09a	2024-009	Minnesota Driftless Hiking Trail	\$426,000	Building a backpacking focused trail across Southeast Minnesota's Driftless Area.	Minnesota Driftless Hiking Trail	Marty Walsh	SE
09b	2024-064	Local Parks, Trails and Natural Areas Grant Programs	\$4,791,000	Provide approximately 18 matching grants for local parks, trail, acquisition of natural areas and trails to connect people safety to desirable community locations and regional or state facilities.	MN DNR, State Parks and Trails Division	Audrey Mularie	Statewide
09c	2024-081	Acquisition of State Parks In-Holdings	\$1,886,000	Complete efficient, time-sensitive acquisition of high priority State Park inholdings, conduct needed site cleanup, and convey the properties to the state to enhance Minnesota's environment and public recreation opportunities.	Parks & Trails Council of Minnesota	Brett Feldman	Statewide
09d	2024-092	Scientific and Natural Area (SNA) Biodiversity Protection	\$957,000	Scientific and Natural Area (SNA) strategic acquisition (~100 acres) will conserve Minnesota's most unique places and rare species for everyone's benefit.	MN DNR, Ecological and Water Resources Division	Judy Schulte	Statewide
09e	2024-093	Metropolitan Regional Parks System Land Acquisition Phase 8	\$3,000,000	Acquire properties with high-quality natural resources or natural resources restoration potential for the metropolitan Regional Parks System. This project will be matched over 100% with Council and local Agency funds.	Metropolitan Council	Jessica Lee	Metro
09f	2024-094	Zumbro River Regional Water Trail	\$170,000	Completion of the Master Plan for the Zumbro River Regional Water Trail (ZRRWT). Roughly 150 miles of navigable waters that wind through a diverse landscape before joining the Mississippi River.	City of Oronoco	Sunny Bjorklund Schultz	SE
09g	2024-113	Spring Lake Park Reserve Restoration and River Access	\$2,925,000	Development of Mississippi River access that includes parking, a non-motorized boat launch, access to the national Mississippi River Trail and hiking trails, natural resource restoration, and cultural resource management.	Dakota County	Niki Geisler	Metro
09h	2024-136	Minnesota State Trails Development	\$5,036,000	This project proposes to expand recreational opportunities on Minnesota State Trails through the rehabilitation and enhancement of existing state trails and replacement or repair of existing state trail bridges.	MN DNR, State Parks and Trails Division	Kent Skaar	Statewide

**M.L. 2024 Environment and Natural Resources Trust Fund (ENRTF)
LCCMR Recommendations for FY 2025**

Subd.	Proposal ID	Title	LCCMR Total Recommended Amount (FY25)	Summary	Organization	Project Manager	Region*
09i	2024-174	Birch Lake Marina Design (Phase 1)	\$197,000	This project consists of the design of a new marina/dock complex on Birch Lake in Babbitt Minnesota.	City of Babbitt	Kathy Vraa	Statewide
09j	2024-264	Dent and Vergas Spur Trails	\$934,000	Construction of a 6.6 mile bituminous trail along CSAH 35 connecting the cities of Dent and Vergas to the Heart of the Lakes Regional Trail and Maplewood State Park.	Otter Tail County	Nicholas Leonard	Central
		SubTotal	\$20,322,000				
Subd. 10 Administration, Emerging Issues, and Contract Agreement Reimbursement (4 Recommendations = \$2,096,000)							
10a	2024-001	LCCMR Budget Supplement (FY25)	\$750,000	Operational Budget Supplement for the Legislative-Citizen Commission on Minnesota Resources (LCCMR).	Legislative-Citizen Commission on Minnesota Resources	LCCMR Universal Account	Statewide
10b	2024-002	Emerging Issues 2024	\$821,000	2024 Emerging Issues.	Legislative-Citizen Commission on Minnesota Resources	LCCMR Universal Account	Statewide
10c	2024-004	Commission Buffer	\$250,000	The buffer is to compensate for any potential errors during allocations. If the buffer is not needed in the end, the commission may either allocate it to another proposal or it will be moved to the Emerging Issues Account line following allocations .	Legislative-Citizen Commission on Minnesota Resources	LCCMR Universal Account	Statewide
10d	2024-117	ML 2024 Contract Agreement Reimbursement	\$275,000	Provide contract management to ENRTF pass-through appropriation recipients for approximately 115 open grants. Ensure funds are expended in compliance with appropriation law, state statute, grants policies, and approved work plans.	MN DNR, Grants Unit	Katherine Sherman-Hoehn	Statewide
		SubTotal	\$2,096,000				
		Total	\$79,644,000				

* Metro region includes the 11 counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright.