

2024 LCCMR Recommendations for the Environment and Natural Resources Trust Fund (ENRTF) as of July 20, 2023

Proposal ID	Category / Subcategory	Project Title	Project Manager and Organization	Recommended Amount	Contingencies
2024-044	A. Foundational Natural Resource Data and Information	Characterizing Tree Cavities and Use by Minnesota's Wildlife	Alexis Grinde, U of MN, Duluth - NRRRI	\$349,000	
2024-046	A. Foundational Natural Resource Data and Information	Fate of Minnesota's Lakes in the Next Century	Ardeshir Ebtehaj, U of MN, College of Science and Engineering	\$453,000	
2024-068	A. Foundational Natural Resource Data and Information	Determining Ambient Background PFAS Concentrations in Minnesota Soils	Sona Psarska, Minnesota Pollution Control Agency	\$621,000	
2024-071	A. Foundational Natural Resource Data and Information	Investigating Life History Characteristics of Minnesota Elk	Eric Michel, MN DNR, Fish and Wildlife Division	\$933,000	
2024-078	A. Foundational Natural Resource Data and Information	DNR County Groundwater Atlas	Paul Putzier, MN DNR, Ecological and Water Resources Division	\$3,200,000	
2024-083	A. Foundational Natural Resource Data and Information	Voyageurs Wolf Project - Phase III	Joseph Bump, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$996,000	
2024-088	A. Foundational Natural Resource Data and Information	Distribution and Population Status of Weasels in Minnesota	Michael Joyce, U of MN, Duluth - NRRRI	\$400,000	
2024-172	A. Foundational Natural Resource Data and Information	Sublethal Effects of Pesticides on Invertebrate Community	Mingzi Xu, U of MN, College of Biological Sciences	\$387,000	
2024-186	A. Foundational Natural Resource Data and Information	Modernizing Minnesota's Plant Community Classification and Field Guides	Bruce Carlson, MN DNR, Ecological and Water Resources Division	\$1,800,000	
2024-192	A. Foundational Natural Resource Data and Information	Assessing Prairie Health to Inform Pollinator Conservation	Erik Runquist, Minnesota Zoological Society	\$297,000	
2024-193	A. Foundational Natural Resource Data and Information	Understanding Native Fishes in the Bowfishing Era	Alec Lackmann, U of MN, Duluth	\$588,000	
2024-215	A. Foundational Natural Resource Data and Information	White-Tailed Deer Movement and Disease in Suburban Areas	Meggan Craft, U of MN, College of Biological Sciences	\$699,000	
2024-223	A. Foundational Natural Resource Data and Information	Geologic Atlases for Water Resource Management	Barbara Lusardi, U of MN, MN Geological Survey	\$1,236,000	
2024-247	A. Foundational Natural Resource Data and Information	Harnessing Cover Crops and Roots for Sustainable Cropping	Axel Garcia y Garcia, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$375,000	
2024-278	A. Foundational Natural Resource Data and Information	Genetic Detection of Endangered Mussels in the Mississippi	Lauren Lynch, US Geological Survey, Ohio Water Microbiology Lab	\$241,000	
2024-037	B. Water Resources	Hyperspectral Characterization of Toxic Harmful Algal Blooms	Ardeshir Ebtehaj, U of MN, St. Anthony Falls Laboratory	\$399,000	
2024-057	B. Water Resources	Characterization of Chemicals in Structural Fire Wastewater	Grace Wilson, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$369,000	
2024-061	B. Water Resources	Climate Change and Management Effects on Lake Methane	James Cotner, U of MN, College of Biological Sciences	\$540,000	
2024-073	B. Water Resources	Enhancing Wastewater Treatment while Bioprospecting for Novel Pharmaceuticals	Timothy LaPara, U of MN, College of Science and Engineering	\$553,000	
2024-086	B. Water Resources	Fluorine Beyond PFAS: Pesticide and Pharmaceutical Degradation	William Arnold, U of MN, College of Science and Engineering	\$400,000	
2024-161	B. Water Resources	Novel Nutrient Recovery Process from Wastewater Treatment Plants	Bo Hu, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$486,000	
2024-164	B. Water Resources	Visitor Perceptions of Lake Water Quality	Bonnie Keeler, U of MN, Humphrey School of Public Affairs	\$379,000	
2024-173	B. Water Resources	Wildfire Impacts on Mercury Cycling in Wilderness Lakes	Christopher Filstrup, U of MN, Duluth - NRRRI	\$297,000	
2024-213	B. Water Resources	Flood and Drought Prediction for Minnesota	Wendy Moylan, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$499,000	
2024-257	B. Water Resources	Breaking the PFAS Cycle with a Full-Scale Demonstration	Andrew McCabe, Barr Engineering Co.	\$1,481,000	Funding would be provided through a grant agreement with the State of Minnesota and for work in cooperation with the city of St. Cloud and the Minnesota Technical Assistance Program (MnTAP) at the University of Minnesota.
2024-279	B. Water Resources	Uncovering the Past to Protect Minnesota's Walleye Fisheries	Adam Heathcote, Science Museum of Minnesota, St. Croix Watershed Research Station	\$1,121,000	
2024-015	C. Environmental Education	Jay C. Hormel Nature Center Supplemental Teaching Staff	Luke Reese, City of Austin	\$410,000	
2024-017	C. Environmental Education	Connecting Communities to Voyageurs Classroom & Minnesota's National Park	Christina Hausman Rhode, Voyageurs Conservancy	\$994,000	
2024-023	C. Environmental Education	Supporting Minnesota Teachers Implement Culturally Sustaining Environmental Education	Seth Thompson, U of MN, College of Biological Sciences	\$295,000	

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2024-027	C. Environmental Education	Phenology Investigations in Minnesota Schools	Robert Blair, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$392,000	
2024-028	C. Environmental Education	Get the Lead Out: Lead-Free Fishing Tackle Education	Kelly Amoth, Minnesota Pollution Control Agency	\$254,000	
2024-058	C. Environmental Education	Water Science and Policy Fellowships for Minnesota	Alexander Frie, U of MN, Duluth - Sea Grant	\$407,000	
2024-059	C. Environmental Education	Mentoring Next Generation of Conservation Professionals Phase 2	Deborah Loon, Minnesota Valley National Wildlife Refuge Trust Inc	\$793,000	
2024-091	C. Environmental Education	Restoring Land, Reviving Heritage: Indigenous Conservation-Phase Two	Hannah Smith, Belwin Conservancy	\$688,000	
2024-099	C. Environmental Education	Unlocking Minnesota Wilderness for Youth	Beth Becker, YMCA of the North	\$705,000	
2024-100	C. Environmental Education	Outdoor Pathways to Environmental Education, Recreation, and Careers	Meg Krueger, Wilderness Inquiry	\$1,500,000	
2024-115	C. Environmental Education	Launching Environmental Education at Shepard Farm	Pete Cleary, Dodge Nature Center	\$639,000	
2024-139	C. Environmental Education	The Boundary Waters is Our Backyard	Alison Nyenhuis, Friends of the Boundary Waters Wilderness	\$500,000	
2024-177	C. Environmental Education	Rural MN Mobile Lab: Environmental/Earth Science Education	Timothy Dudley, U of MN, Crookston	\$459,000	
2024-188	C. Environmental Education	Increasing Accessibility of Environmental Education at Deep Portage	Lindsay Bjorklund, Deep Portage Learning Center	\$228,000	
2024-250	C. Environmental Education	Water Quality and Robots: Experientially Educating Minnesotan Youth	Nikolaos Papanikolopoulos, U of MN, College of Science and Engineering	\$353,000	
2024-272	C. Environmental Education	Expanding Youth and Family Fishing Opportunities	Brian Nerbonne, MN DNR, Fish and Wildlife Division	\$1,162,000	
2024-292	C. Environmental Education	North Minneapolis Nature Connection: Storytelling and Leadership Pathways	DeAnna Perkins, The Loppet Foundation	\$697,000	
2024-089	D. Aquatic and Terrestrial Invasive Species	Minnesota Invasive Terrestrial Plants and Pests Center, 6	Robert Venette, U of MN, MITPPC	\$7,000,000	
2024-097	D. Aquatic and Terrestrial Invasive Species	Mitigating the Spread of Invasive Jumping Worms	Vera Krischik, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$470,000	
2024-114	D. Aquatic and Terrestrial Invasive Species	Implementing Innovative Techniques to Manage Low-Density Invasive Carp	Brian Nerbonne, MN DNR, Fish and Wildlife Division	\$634,000	
2024-039	E. Air Quality, Climate Change, and Renewable Energy	Minimizing Minnesota's Landfill Problem by Expanding Waste Diversion	Jason Allen, Better Futures Minnesota	\$2,318,000	
2024-049	E. Air Quality, Climate Change, and Renewable Energy	Building Resilient Urban Forests for Climate Change	Todd Rexine, Great River Greening	\$752,000	
2024-076	E. Air Quality, Climate Change, and Renewable Energy	Improving Agricultural Ecosystems through Autonomous Weed Control	Eric Buchanan, U of MN, WCROC	\$978,000	
2024-098	E. Air Quality, Climate Change, and Renewable Energy	Advanced Biofilter for N2O Removal	Satoshi Ishii, U of MN, College of Biological Sciences	\$325,000	
2024-153	E. Air Quality, Climate Change, and Renewable Energy	Managing Future Floods and Droughts in Minnesota	Heidi Roop, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$460,000	
2024-022	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Morrison County Historical Society Streambank Stabilization and Restoration	Shannon Wettstein, Morrison Soil and Water Conservation District	\$519,000	
2024-045	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Can Increased Tree Diversity Increase Community Diversity?	Marcella Windmuller-Campione, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$415,000	
2024-096	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Pollinator Central 4: Habitat Improvement with Public Engagement	Rebecca Tucker, Great River Greening	\$698,000	
2024-103	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Conservation Grazing for Birds, Beef, and Better Soil	Dale Gentry, Audubon Minnesota	\$342,000	
2024-108	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Minnesota Microbes for Enhanced Biodegradation of Microplastics	Brett Barney, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$524,000	
2024-170	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Completing the Mississippi River Greenway: Dakota County	John Mertens, Dakota County	\$657,000	
2024-175	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Enabling Nature to Destroy Environmental PFAS Contaminants	Romas Kazlauskas, U of MN, College of Biological Sciences	\$378,000	
2024-185	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Bioacoustics for Species Monitoring and Conservation Phase II	Elena West, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$568,000	
2024-189	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Preventing PFAS and Microplastics Contaminants across Minnesota	Roger Ruan, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$656,000	

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2024-227	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Shingle Creek Aquatic and Shoreline Habitat Enhancement	Adam Arvidson, Minneapolis Park and Recreation Board	\$1,100,000	
2024-237	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	LIDAR Technology Preventing Wildlife Fatalities from Wind Turbines	Sayan Biswas, U of MN, College of Science and Engineering	\$525,000	
2024-255	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Road Salt Pollution of Surface Waters from Groundwater	John Gulliver, U of MN, College of Science and Engineering	\$622,000	
2024-277	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Growing the Minnesota Bison Conservation Herd	Edward Quinn, MN DNR, State Parks and Trails Division	\$1,775,000	
2024-298	F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Priority Lakes: Meeting Protection Goals and Multiplying Benefits	Crystal Mathisrud, Hubbard County Soil & Water Conservation District	\$1,890,000	
2024-009	G. Land Acquisition, Habitat, and Recreation	Minnesota Driftless Hiking Trail	Marty Walsh, Minnesota Driftless Hiking Trail	\$426,000	
2024-064	G. Land Acquisition, Habitat, and Recreation	Local Parks, Trails and Natural Areas Grant Programs	Audrey Mularie, MN DNR, State Parks and Trails Division	\$4,791,000	
2024-081	G. Land Acquisition, Habitat, and Recreation	Acquisition of State Parks In-Holdings	Brett Feldman, Parks & Trails Council of Minnesota	\$1,886,000	
2024-092	G. Land Acquisition, Habitat, and Recreation	Scientific and Natural Area (SNA) Biodiversity Protection	Judy Schulte, MN DNR, Ecological and Water Resources Division	\$957,000	
2024-093	G. Land Acquisition, Habitat, and Recreation	Metropolitan Regional Parks System Land Acquisition Phase 8	Jessica Lee, Metropolitan Council	\$3,000,000	
2024-113	G. Land Acquisition, Habitat, and Recreation	Spring Lake Park Reserve Restoration and River Access	Niki Geisler, Dakota County	\$2,925,000	
2024-136	G. Land Acquisition, Habitat, and Recreation	Minnesota State Trails Development	Kent Skaar, MN DNR, State Parks and Trails Division	\$5,036,000	
2024-264	G. Land Acquisition, Habitat, and Recreation	Dent and Vergas Spur Trails	Nicholas Leonard, Otter Tail County	\$934,000	
2024-014	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Native Plant Community Data in City of Duluth	Virginia Breidenbach, Minnesota Land Trust	\$198,000	
2024-036	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Reconstructing Historical Wild Rice to Understand Its Future	Lienne Sethna, Science Museum of Minnesota, St. Croix Watershed Research Station	\$200,000	
2024-048	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Turtle Island Skywatchers – Minnesota Research and Data Visualization	Annette S. Lee, Native Skywatchers Inc	\$200,000	
2024-063	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Monitoring Minnesota's Insects: Connecting Habitat to Insect Prey	Matthew Petersen, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$199,000	
2024-072	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Foundational Data for Moth and Butterfly Conservation	Kyle Johnson, MN DNR, Ecological and Water Resources Division	\$195,000	
2024-150	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Improving Aquatic Plant Knowledge for Healthy Waters	Holly Bernardo, MN DNR, Ecological and Water Resources Division	\$198,000	
2024-158	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	New Small Mammal Monitoring Methods for Minnesota	Ron Moen, U of MN, Duluth - NRRRI	\$199,000	
2024-163	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Status of Bats and Roost Trees after White-Nose	Ron Moen, U of MN, Duluth - NRRRI	\$195,000	
2024-206	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Preserving Minnesota Wildflower Information	Ya Yang, U of MN, Bell Museum of Natural History	\$199,000	
2024-222	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Highly Pathogenic Avian Influenza and Minnesota Raptors	Victoria Hall, U of MN, Raptor Center	\$187,000	
2024-224	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Remote Sensing for Pollinator Habitat	Wendy Caldwell, Monarch Joint Venture	\$180,000	
2024-251	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Effects of Conservation Grazing on Solar Pollinator Habitat	Daniel Tix, Minnesota Native Landscapes	\$88,000	Funding would be provided through a grant agreement with the State of Minnesota and for work in cooperation with Temple University.
2024-296	H. Small Projects Sub: A. Foundational Natural Resource Data and Information	Integrated Population Modeling for Trumpeter Swans	Todd Arnold, U of MN, College of Food, Agricultural and Natural Resource Sciences	\$180,000	
2024-077	H. Small Projects Sub: B. Water Resources	Improving Water Efficiency Programming with Measurable Outcomes	Heidi Quinn, City of Woodbury	\$200,000	
2024-269	H. Small Projects Sub: B. Water Resources	Are Stream Restoration Efforts Effective? An Evidence-Based Assessment.	Andrew Robertson, Saint Mary's University	\$200,000	
2024-111	H. Small Projects Sub: C. Environmental Education	Increasing Access to Environmental Education Youth Camps	Bryan Wood, Osprey Wilds Environmental Learning Center	\$163,000	
2024-129	H. Small Projects Sub: C. Environmental Education	YES! Students Step Up To Reduce Carbon Footprint	Kalley Pratt, Prairie Woods Environmental Learning Center	\$199,000	
2024-168	H. Small Projects Sub: C. Environmental Education	Season Watch: Cultivating Young Naturalists with Phenology Education	Sarah Bignall, Northern Community Radio, Inc.	\$180,000	

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2024-200	H. Small Projects Sub: C. Environmental Education	College-School Collaboration to Promote Environmental Career Paths	Kimberly Musser, Minnesota State Colleges and Universities, Minnesota State University Mankato	\$174,000	
2024-273	H. Small Projects Sub: C. Environmental Education	Youth Conservation Empowerment Project	Nicole Pokorney, U of MN, Extension Center for Youth Development	\$70,000	
2024-198	H. Small Projects Sub: D. Aquatic and Terrestrial Invasive Species	Early Detection of Invasive Viruses in Native Pollinators	Declan Schroeder, U of MN, College of Veterinary Medicine	\$200,000	
2024-005	H. Small Projects Sub: E. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Long-Term Preservation of Minnesota's Ball Cactus Population	David Remucal, U of MN, Landscape Arboretum	\$100,000	
2024-090	H. Small Projects Sub: F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat	Restoration of Riverside Park	Ted Gray, City of Long Prairie	\$141,000	
2024-094	H. Small Projects Sub: G. Land Acquisition, Habitat, and Recreation	Zumbro River Regional Water Trail	Sunny Bjorklund Schultz, City of Oronoco	\$170,000	
2024-174	H. Small Projects Sub: G. Land Acquisition, Habitat, and Recreation	Birch Lake Marina Design (Phase 1)	Kathy Vraa, City of Babbitt	\$197,000	
2024-001	I. Administration	LCCMR Budget Supplement (FY25)	LCCMR Universal Account, Legislative-Citizen Commission on Minnesota Resources	\$750,000	
2024-002	I. Administration	Emerging Issues 2024	LCCMR Universal Account, Legislative-Citizen Commission on Minnesota Resources	\$821,000	
2024-004	I. Administration	Commission Buffer	LCCMR Universal Account, Legislative-Citizen Commission on Minnesota Resources	\$250,000	
2024-117	I. Administration	ML 2024 Contract Agreement Reimbursement	Katherine Sherman-Hoehn, MN DNR, Grants Unit	\$275,000	
			Total	\$79,644,000	