

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

As of April 2, 2021, the Legislative-Citizen Commission on Minnesota Resources (LCCMR) received 220 proposals requesting a total of approximately \$178 million. This RFP process is for funding beginning July 1, 2022. On June 16-17, members will select a subset of high-ranking proposals to invite for presentation before the LCCMR on July 6-8 and 13-15 in order to receive further consideration. On July 28-29, LCCMR will make final selection and funding allocation decisions. These selected projects will be presented to the 2022 Minnesota Legislature as the official LCCMR recommendations for spending from the Environment and Natural Resources Trust Fund.

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
A. Foundational Natural Resource Data and Information (26 Proposals / \$22,766,000)					
2022-031	Haus	Jacob	Efficacy of Urban Archery Hunting to Manage Deer	Minnesota State Colleges and Universities, Bemidji State University	\$329,000
2022-076	Kloiber	Steve	Modernizing Minnesota's Digital Lake Inventory	MN DNR, Ecological and Water Resources Division	\$787,000
2022-081	Van Offelen	Henry	Strategic Framework to Guide Local Water Storage Implementation	Board of Water and Soil Resources	\$220,000
2022-091	Wagenius	Stuart	How Do Prescribed Fires Affect Native Prairie Bees?	Negaunee Institute for Plant Conservation Science and Action at the Chicago Botanic Garden	\$421,000
2022-102	Anderson	Pamela	Public Portal for Algae Blooms in Lakes	Minnesota Pollution Control Agency	\$846,000
2022-106	Putzier	Paul	County Groundwater Atlas ML2022	MN DNR, Ecological and Water Resources Division	\$1,400,000
2022-108	Noe	Ryan	Walleye or Water Clarity? Evaluating Alternative Lake Futures	U of MN, Humphrey School of Public Affairs	\$207,000
2022-114	Grinde	Alexis	EAB and Black Ash: Maintaining Forests and Benefits-Resubmission	U of MN, Duluth - NRRI	\$800,000
2022-119	Arends	Heather	Mapping Construction Resources for Recreation and Transportation Infrastructure	MN DNR, Lands and Minerals Division	\$776,000
2022-122	Joyce	Michael	Distribution and Movements of Fishers in Southern Minnesota	U of MN, Duluth - NRRI	\$347,000
2022-123	Joyce	Michael	Bobcat and Fisher Habitat Use and Interactions	U of MN, Duluth - NRRI	\$447,000
2022-148	Bump	Joseph	Voyageurs Wolf Project - Phase II	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$694,000
2022-149	Bump	Joseph	Offal Wildlife Watching: How Do Hunters Provision Scavengers?	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$531,000
2022-172	Fulton	David	Addressing Conflict between Wild Canids and People	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$326,000

**ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries**

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-173	Lusardi	Barbara	Geologic Atlases for Water Resource Management	U of MN, MN Geological Survey	\$4,122,000
2022-182	McCann	Nicholas	Determining Effectiveness of Donkeys for Nonlethal Wolf Deterrence	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$349,000
2022-187	Forester	James	Mapping the Ecology of Urban and Rural Canids	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$550,000
2022-200	Windmuller-Campione	Marcella	Maximizing Lowland Conifer Ecosystem Services: Phase 2	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$500,000
2022-204	Shaw	Ruth	Healthy Prairies III: Restoring Minnesota's Prairie Plant Diversity	U of MN, College of Biological Sciences	\$531,000
2022-215	Tri	Andrew	What's Causing Declines in Black Bear Reproduction	MN DNR, Fish and Wildlife Division	\$553,000
2022-217	Larsen	Peter	Establishing a Center for Prion Research and Outreach	U of MN, College of Veterinary Medicine	\$4,356,000
2022-226	Carstensen	Michelle	Neonicotinoid Impacts on Minnesota Deer and Prairie Chickens	MN DNR, Fish and Wildlife Division	\$1,060,000
2022-238	Rowe	Erika	Expanding the Minnesota Ecological Monitoring Network	MN DNR, Ecological and Water Resources Division	\$800,000
2022-247	Whitfeld	Timothy	Minnesota Biodiversity Atlas - Phase 3	U of MN, Bell Museum of Natural History	\$593,000
2022-266	Anderson	Neil	Sweetening the Crop: Perennial Flax for Pollinator/Ecosystem Benefits	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$791,000
2022-275	Duncan	Nancy	Beavers, Trees and Climate - Increasing Floodplain Forest Resilience	National Park Service, Mississippi National River and Recreation Area	\$430,000
				Subtotal	\$22,766,000
A. Foundational Natural Resource Data and Information					
H. Small Projects (14 Proposals / \$2,571,000)					
2022-043	Grinde	Alexis	Improving Golden-Winged Warbler Conservation and Habitat Restoration	U of MN, Duluth - NRRI	\$197,000
2022-045	Huberty	Brian	Charting Minnesota's Future Natural Resources	SharedGeo	\$142,000
2022-048	Harris	Fred	Enhancing Natural Resource Conservation through Species Distribution Modeling	MN DNR, Ecological and Water Resources Division	\$200,000
2022-068	Moen	Ron	Minnesota Mammal Atlas	U of MN, Duluth - NRRI	\$116,000

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-069	Moen	Ron	Effects of Road Mortality on Minnesota Wildlife	U of MN, Duluth - NRRI	\$183,000
2022-109	Gross	Briana	Status of Minnesota Blueberries and Relatives	U of MN, Duluth	\$191,000
2022-138	Stanton	Daniel	Moss and Lichens of Minnesota Prairies and Meadows	U of MN, College of Biological Sciences	\$160,000
2022-153	Bracey	Annie	Conserving Black Terns and Forster's Terns in Minnesota-Resubmission	U of MN, Duluth - NRRI	\$199,000
2022-163	Wickert	Andrew	Land-Use and Climate Impacts on Minnesota's Whitewater River	U of MN, St. Anthony Falls Laboratory	\$199,000
2022-185	Aukema	Brian	Protecting Minnesota's Spruce-Fir Forests from Tree-Killing Budworm	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$189,000
2022-193	David	Andrew	Restoration of Eastern Hemlock; Minnesota's Endangered Tree Species	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$199,000
2022-208	Salomon	Christine	Characterizing Microbial Diversity of Ephemeral Minnesota Wetlands	U of MN, College of Pharmacy	\$200,000
2022-225	Breidenbach	Virginia	Native Plant Community Data in City of Duluth	Minnesota Land Trust	\$198,000
2022-254	Petersen	Jessica	Tools for Supporting Healthy Ecosystems and Pollinators	MN DNR, Ecological and Water Resources Division	\$198,000
				Subtotal	\$2,571,000
B. Water Resources (34 Proposals / \$17,503,000)					
2022-046	Jordan	Nicholas	Scaling A Market-Driven Water-Quality Solution for Row-Crop Farming	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$835,000
2022-053	Ruan	Roger	Advanced Anaerobic Digestion for Organic Waste Utilization	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$523,000
2022-056	Montgomery	Brandon	Unsewered Area Pilot Program: NE MN Project Facilitator	Minnesota Pollution Control Agency	\$450,000
2022-059	Kang	Peter	Site Suitability for Aquifer Storage and Recovery	U of MN, St. Anthony Falls Laboratory	\$394,000
2022-063	Groten	Joel	Website Development: Statewide Sediment Estimates Improves River Restoration	US Geological Survey, Upper Midwest Water Science Center	\$250,000
2022-079	Griffin	Daniel	Rainfall History Recovered from Old Oak Tree Rings	U of MN, College of Liberal Arts	\$570,000
2022-086	Baker	Lawrence	Can We Turn Our Cities' Green Lakes Blue?	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$632,000

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-087	LaPara	Timothy	High Temperature Anaerobic Digestion of Sewage Sludge	U of MN, College of Science and Engineering	\$302,000
2022-095	Breneman	Dan	Evaluating Locally Sourced BIOCHAR for Restoring Impaired Waterbodies	Minnesota Pollution Control Agency	\$278,000
2022-098	Hozalski	Raymond	Assessing Prevalence of Brain-Eating Amoeba in Minnesota Lakes	U of MN, College of Science and Engineering	\$487,000
2022-099	Yang	Judy	Mitigating Cyanobacterial Blooms and Toxins Using Clay-Algae Flocculation	U of MN, St. Anthony Falls Laboratory	\$366,000
2022-103	Ozersky	Ted	Changing Winters and Game Fish in Minnesota Lakes	U of MN, Duluth - Large Lakes Observatory	\$267,000
2022-116	Baker	Anna	Rainy River Drivers of Lake-of-the-Woods Algal Blooms	US Geological Survey, Upper Midwest Water Science Center	\$683,000
2022-129	Hansen	Gretchen	Causes and Consequences of Lake Water Quality Change	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$397,000
2022-141	Novak	Paige	Enhancing Biodegradation of Emerging Contaminants via Microbial Starvation	U of MN, College of Science and Engineering	\$263,000
2022-152	Twine	Tracy	Water and Climate Information to Enhance Community Resilience	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$564,000
2022-155	Ulrich	Bridget	Catch and Reveal: Discovering Unknown Fish Contamination Threats	U of MN, Duluth - NRRI	\$276,000
2022-164	Beck	Brian	Leveraging Innovations in Data Analytics for Project Implementation	Minnehaha Creek Watershed District	\$791,000
2022-175	Keegan	Bill	Innovative PFAS Solution to Protect Minnesota Natural Resources	Dem-Con	\$750,000
2022-184	Penn	Lee	Microplastics from Paint Chips: Impact on Contaminant Transport	U of MN, College of Science and Engineering	\$471,000
2022-191	Cui	Tianhong	Solar Powered Sensor for Monitoring Pesticide in Water	U of MN, College of Science and Engineering	\$300,000
2022-192	Cui	Tianhong	Smart Purification System for Clean Drinking Water	U of MN, College of Science and Engineering	\$400,000
2022-201	Novak	Paige	Technology for Energy-Generating Onsite Industrial Wastewater Treatment	U of MN, College of Science and Engineering	\$352,000
2022-206	Arnold	William	Mapping Pollutant Sources across Land Use Gradients	U of MN, College of Science and Engineering	\$420,000
2022-218	Erickson	Andy	Removing CECs from Stormwater with Biofiltration	U of MN, St. Anthony Falls Laboratory	\$646,000

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-224	Phelps	Nicholas	Is the Tire Chemical 6PPDq Killing Minnesota's Fish?	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$491,000
2022-230	Wright	Natasha	Managing Highly Saline Waste from Municipal Water Treatment	U of MN, College of Science and Engineering	\$266,000
2022-235	Downing	John	Different Causes=Different Cures for Murky Lakes	U of MN, Duluth - Sea Grant	\$769,000
2022-257	Sattar	Junaed	Automated Weed Management for Herbicide Water Runoff Reduction	U of MN, College of Science and Engineering	\$816,000
2022-264	Edlund	Mark	Unprecedented Change Threatens Minnesota's Pristine Lakes	Science Museum of Minnesota, St. Croix Watershed Research Station	\$850,000
2022-265	Deng	Shaobo	Innovative Technology for PFAS Destruction in Drinking Water	U of MN, Southern Research and Outreach Center	\$500,000
2022-269	Stapleton	Seth	Expanding Restoration and Promoting Awareness of Native Mussels	Minnesota Zoological Society	\$415,000
2022-272	Edlund	Mark	Salt Threatens Minnesota Water Quality and Fisheries	Science Museum of Minnesota, St. Croix Watershed Research Station	\$1,228,000
2022-286	St. Lawrence	Mark	Emerging PFAS Contaminant Mitigation Using Hybrid Engineered Wetlands	St. Louis County	\$501,000
				Subtotal	\$17,503,000
B. Water Resources					
H. Small Projects (11 Proposals / \$1,892,000)					
2022-049	Ruan	Roger	Destruct Per/Polyfluoroalkyl Substances (PFAS) in Landfill Leachates	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$200,000
2022-094	Boser	Sarah	Comprehensive Management Plan - Big Birch Lake	Sauk River Watershed District	\$25,000
2022-134	Ishii	Satoshi	Algal Granule Bioreactors for Nitrogen and Phosphorus Removal	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$200,000
2022-157	Luke	Charlene	Enhanced Protection and Preservation of Lake Fourteen Waters	Lake Fourteen Clear Water Alliance (LFCWA)	\$136,000
2022-166	Ulrich	Jason	Increased Intense Rain and Flooding in Minnesota's Watersheds	Science Museum of Minnesota, St. Croix Watershed Research Station	\$192,000
2022-213	Simon	Terrence	Toxic Algae Removal System Powered by Solar Energy	U of MN, College of Science and Engineering	\$200,000
2022-219	Herb	William	Big Waves and Their Impact on Lake Shorelines	U of MN, St. Anthony Falls Laboratory	\$199,000

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-234	Hill	Craig	Monitoring Wind and Boat Waves Using IoT Technology	U of MN, Duluth	\$196,000
2022-242	Hill	Kimberly	Freeze-Thaw and Flood-Drought Cycling on Streambank Erosion	U of MN, St. Anthony Falls Laboratory	\$199,000
2022-251	Tallaksen	Joel	Mitigations Strategies for Agroplastic PFAS and Microplastic Contamination	U of MN, WCROC	\$169,000
2022-285	Kiesling	Richard	Trace Metal Benchmarks for NE Minnesota Lakes	US Geological Survey, Upper Midwest Water Science Center	\$176,000
				Subtotal	\$1,892,000
C. Environmental Education (16 Proposals / \$9,311,000)					
2022-007	Remucal	David	Cultivating Minnesota's Next Generation of Natural Heritage Protectors	U of MN, Landscape Arboretum	\$480,000
2022-026	Born	Patty	Teacher Field School: Stewardship through Nature-Based Education	Hamline University	\$500,000
2022-029	Wood	Bryan	Increasing K-12 Student Learning to Achieve ENRTF's Goals	Osprey Wilds Environmental Learning Center	\$1,800,000
2022-066	Cariveau	Alison	Expanding Access to Wildlife Learning Bird by Bird	MN DNR, Ecological and Water Resources Division	\$276,000
2022-083	Thompson	Seth	Connecting Minnesotans to Water through Informal Environmental Education	U of MN, College of Biological Sciences	\$445,000
2022-084	Thompson	Seth	Sparking Curiosity through Hands-On Environmental Education in Minnesota	U of MN, College of Biological Sciences	\$298,000
2022-100	Dorn	Cindy	Statewide Environmental Education via PBS Outdoor Series	Pioneer Public Television	\$300,000
2022-104	Gagner	Alyson	Illuminate the Natural World and Inspire Its Conservation	YMCA of the Greater Twin Cities	\$492,000
2022-160	Hobbs	Joy	LCCMR Stories: Sharing Minnesota's Biggest Environmental Investment	Science Museum of Minnesota	\$604,000
2022-169	Schmitt	Lee	ESTEP (Earth Science Teacher Education Project)	Minnesota Science Teachers Association	\$495,000
2022-240	Loon	Deborah	Mentoring the Next Generation of Conservation Professionals	Minnesota Valley National Wildlife Refuge Trust Inc	\$708,000
2022-241	Thompson	Molly	North Shore Private Forestry Outreach Education and Implementation	Sugarloaf The North Shore Stewardship Association	\$375,000
2022-249	Lenczewski	John	Strengthening Watershed Stewardship through Outdoor Youth Education	Minnesota Trout Unlimited	\$298,000

**ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries**

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-280	Rice	Rebecca	Trees for Equity	Metro Blooms	\$598,000
2022-282	Edmiston	Julie	Minnesota Freshwater Quest: Environmental Education for 30000 Youth	Wilderness Inquiry	\$1,432,000
2022-283	Cleary	Pete	Dodge Nature Center Naturalist for Outreach and Inclusion	Dodge Nature Center	\$210,000
				Subtotal	\$9,311,000
C. Environmental Education					
H. Small Projects (15 Proposals / \$2,607,000)					
2022-022	Capel	Paul	Reaching Minnesota's Recent Immigrant Community with Environmental Education	U of MN, College of Science and Engineering	\$177,000
2022-060	Zimmermann	Candice	Enhancing Outdoor Education and Conservation Awareness	Paul Bunyan Arboretum	\$154,000
2022-085	Thompson	Seth	Supporting Community-Based Water Conservation through Public Engagement	U of MN, College of Biological Sciences	\$125,000
2022-093	Heneghan	Natalie	Statewide Deconstruction Education Program	Preservation Alliance of Minnesota d.b.a Rethos: Places Reimagined	\$186,000
2022-096	Furuseth	Lee	Mobile Lab Science Comes to You	Headwaters Science Center	\$134,000
2022-107	Kilgore	Amy	Engaging a Diverse Public in Environmental Stewardship	Great River Greening	\$200,000
2022-162	Swenson	Rebecca	Bugs Below Zero: Engaging Citizens in Winter Research	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$198,000
2022-196	Montgomery	Maggie	Engaging Minnesotans with Phenology: Radio, Podcasts, Citizen Science	Northern Community Radio, Inc.	\$198,000
2022-210	Watkins	Eric	Lawn Sustainability through a Pilot Lawn Ambassador Program	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$136,000
2022-212	Swazee	Stephen	Emergency Location Markers for Minnesota's Trails, Parks and Landings	SharedGeo	\$198,000
2022-236	Foster	Shelli-Kae	YES! Students Take Action-Complete 80+ Eco Projects	Prairie Woods Environmental Learning Center	\$199,000
2022-250	Daniel	Mimi	Increasing Diversity in Environmental Careers	MN DNR, Operational Services Division (OSD)	\$182,000
2022-259	Caldwell	Wendy	Partnering for Pollinator Protection	Monarch Joint Venture	\$123,000

**ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries**

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-273	Pulscher	MaryLynn	BioBlitzes Engaging Community in Scientific Efforts	Minneapolis Parks and Recreation Board	\$198,000
2022-279	Safiq	Alexandrea	Diversity and Access to Wildlife Related Opportunities	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$199,000
				Subtotal	\$2,607,000
D. Aquatic and Terrestrial Invasive Species (6 Proposals / \$15,376,000)					
2022-019	McClannahan	Valerie	Protect Community Forests by Managing Ash for EAB	MN DNR, Forestry Division	\$5,930,000
2022-067	Koop	Heather	Minnesota Invasive Terrestrial Plants and Pests Center	U of MN, MITPPC	\$7,000,000
2022-186	Abrahamson	Mark	Noxious Weed Grants for Local Governments / Tribal Nations	Minnesota Department of Agriculture	\$1,000,000
2022-207	Salomon	Christine	White Nose Bat Syndrome Biological Control: Phase 3	U of MN, College of Pharmacy	\$449,000
2022-237	Clark	Mark	Evaluating Bowfishing for Invasive Carp Control	U of MN, Duluth	\$519,000
2022-281	Nerbonne	Brian	Applying New Tools and Techniques Against Invasive Carp	MN DNR, Fish and Wildlife Division	\$478,000
				Subtotal	\$15,376,000
D. Aquatic and Terrestrial Invasive Species H. Small Projects (5 Proposals / \$844,000)					
2022-089	Sickmann	Katie	Purple Loosestrife Biocontrol Citizen Science Program	St. Croix River Association	\$174,000
2022-139	Brady	Valerie	How Effective and Protective are AIS Removal Methods?	U of MN, Duluth - NRRI	\$122,000
2022-136	Ruhland	Christopher	Photosynthetic Temperature Response of Parrot Feather (Myriophyllum Aquaticum)	Minnesota State Colleges and Universities, Minnesota State University Mankato	\$151,000
2022-256	Edlund	Mark	Invasive Rock Snot Threatens North Shore Streams	Science Museum of Minnesota, St. Croix Watershed Research Station	\$197,000
2022-261	Sadowsky	Maurice	Commercialization Safe, Selective and Low-Cost Carp Piscicide	MJSTI Corp.	\$200,000
				Subtotal	\$844,000
E. Air Quality, Climate Change, and Renewable Energy (18 Proposals / \$9,651,000)					
2022-028	Hamilton	Patrick	Advanced Aquifer Heat Transfer Technology for Buildings	Science Museum of Minnesota	\$606,000

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-054	Ruan	Roger	Nitrogen Fixation and Nitrate Concentration for Land Crops	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$802,000
2022-055	Ruan	Roger	Chemical and Molecular Recycling of Environmental Plastics	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$910,000
2022-071	Barry	Brian	Using Minnesota Timber to Mitigate Landfill Methane Emissions	U of MN, Duluth - NRRI	\$1,235,000
2022-072	Wilson	David	Merging lidar and Satellite Imagery for Carbon Estimation	MN DNR, Forestry Division	\$344,000
2022-077	Singsaas	Eric	Biochar Soil Amendment to Improve Urban Tree Survival	U of MN, Duluth - NRRI	\$397,000
2022-090	Wright	Christopher	Reforestation Projects for Carbon Markets	U of MN, Duluth - NRRI	\$247,000
2022-092	Toan	Sam	Reducing Greenhouse Gases through CO2 Conversion to Ethanol	U of MN, Duluth	\$400,000
2022-117	Cotner	James	How Do Lakes Influence Minnesota's Carbon Budget?	U of MN, College of Biological Sciences	\$499,000
2022-177	Gerber	James	Pathways to Reduced Emissions while Improving Land Use	U of MN, Institute on the Environment	\$597,000
2022-180	Leighton	Chris	Green Solar Cells from a Minnesota Natural Resource	U of MN, College of Science and Engineering	\$756,000
2022-190	Li	Jiayu	Quantify Air Exposure Levels of Different Demographic Groups	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$360,000
2022-199	Li	Jiayu	Quantify On-Farm Methane Emissions with Low-Cost Sensor Networks	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$425,000
2022-211	Watkins	Eric	Climate Resilient Lawns for Minnesota	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$479,000
2022-231	Kortshagen	Uwe	Minnesota Renewable Energy Jobs through Technology Commercialization	U of MN, College of Science and Engineering	\$332,000
2022-232	Shen	Lian	Study of Fog in Minnesota Climate and Environment	U of MN, St. Anthony Falls Laboratory	\$340,000
2022-239	Ferry	Vivian	Transparent Solar Panes for Agrivoltaics	U of MN, College of Science and Engineering	\$404,000
2022-252	Li	Jiayu	Quantify Indoor Air Quality Improvement with Air Purifiers	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$518,000
				Subtotal	\$9,651,000
E. Air Quality, Climate Change, and Renewable Energy					

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
H. Small Projects (7 Proposals / \$1,306,000)					
2022-050	Ruan	Roger	Remove Pollutants from Landfill Air Emissions	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$200,000
2022-051	Ruan	Roger	Nitrogen Fixation from Atmosphere for Urban Hydroponics	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$200,000
2022-052	Ruan	Roger	Produce Carbon Nanotube and Hydrogen from Waste Plastics	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$200,000
2022-120	Tucker	Rebecca	Biochar Implementation in Habitat Restoration: Pilot	Great River Greening	\$176,000
2022-179	Bazurto	Jannell	Employing the Plant Microbiome to Protect Minnesota Plants	U of MN, College of Biological Sciences	\$162,000
2022-189	Sarkanen	Simo	Processing Biodegradable Plastics from Cloquet Pulp Mill Lignin	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$198,000
2022-291	Hill	Blaine	Morris GHG Emissions Inventory and Mitigation Strategies	City of Morris	\$170,000
				Subtotal	\$1,306,000
F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat (27 Proposals / \$32,218,000)					
2022-006	Remucal	David	Minnesota's Volunteer Rare Plant Conservation Corps	U of MN, Landscape Arboretum	\$859,000
2022-018	Smith	Brittany	Rare Species Habitat Restoration	River Bend Nature Center	\$223,000
2022-034	Miller	Brian	Conservation Corps Veterans Service Corps Program	Conservation Corps Minnesota	\$1,504,000
2022-047	Bruse	Tanner	Conservation Cooperative for Working Lands	Pheasants Forever Inc	\$4,993,000
2022-058	Pederson	Eric	Pollinator Habitat Pilot Project at Closed Landfills	Minnesota Pollution Control Agency	\$1,375,000
2022-062	Foehrenbacher	Colleen	Root River Habitat Restoration Project	Eagle Bluff Environmental Learning Center	\$790,000
2022-065	Jenkins	Chris	Hastings Lake Rebecca Park Area	City of Hastings, Parks & Recreation	\$2,000,000
2022-137	Hogan	Christopher	Minnesota Center for Agricultural Spray Drift Reduction	U of MN, College of Science and Engineering	\$1,090,000
2022-142	Winter	Colleen	RDB	City of Melrose	\$1,105,000

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-145	Gordon	Brad	Restoring Forests and Savannas Using Silvopasture- Phase 2	Great River Greening	\$618,000
2022-146	Weiss	Eric	Minnesota Green Schoolyards	The Trust for Public Land	\$1,088,000
2022-167	Snell-Rood	Emilie	Pollinator Plantings and the Redistribution of Soil Toxins	U of MN, College of Biological Sciences	\$610,000
2022-174	Tucker	Rebecca	Pollinator Central: Habitat Improvement with Citizen Monitoring	Great River Greening	\$981,000
2022-181	Luukkala	Lisa	Mitigating the Effects of Visitor Use Patterns	Superior Hiking Trail Association	\$485,000
2022-209	Ferrington	Leonard	Winter Dynamics of Trout Streams: Southeast/Southcentral Minnesota	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$497,000
2022-214	Hu	Bo	Phytoremediation for Extracting Deicing Salt	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$507,000
2022-221	Beyer	Jamie	Mustinka River Fish and Wildlife Habitat Corridor Rehabilitation	Bois de Sioux Watershed District	\$3,025,000
2022-223	Yavarow	Matthew	Phelps Mill Wetland and Prairie Restoration	Otter Tail County	\$792,000
2022-233	Shen	Lian	Wave-Vegetation Interaction Research for Shoreline Protection and Environment	U of MN, St. Anthony Falls Laboratory	\$300,000
2022-244	Arvidson	Adam	Bohemian Flats Savanna Restoration	Minneapolis Parks and Recreation Board	\$286,000
2022-246	Arvidson	Adam	Roberts Bird Sanctuary and Lyndale Gardens	Minneapolis Parks and Recreation Board	\$995,000
2022-258	Delong	Michael	Stream Ecosystems: Are Restorative Efforts Effective?	Minnesota State Colleges and Universities, Winona State University	\$533,000
2022-260	Ekola	Lindberg	Watershed and Forest Restoration: What a Match!	Board of Water and Soil Resources	\$3,728,000
2022-267	Zentner	Dave	Educating and Supporting Farmers to Fully Implement Regenerative Agriculture	Izaak Walton League of America, Minnesota Division	\$550,000
2022-271	Kohno	Satomi	Perfluorinated Pollutants and Raising Temperature Exterminate Turtles	Minnesota State Colleges and Universities, St. Cloud State University	\$348,000
2022-274	Arvidson	Adam	Mississippi River Aquatic Habitat Restoration and Mussel Reintroduction	Minneapolis Parks and Recreation Board	\$2,538,000
2022-287	Aukema	Brian	Native Eastern Larch Beetle (FY2020 pending recommendation 219-F)	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$398,000
				Subtotal	\$32,218,000

ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat					
H. Small Projects (12 Proposals / \$2,183,000)					
2022-011	Blumentritt	Tony	Pickwick Mill Dam Repair	Pickwick Mill, Inc.	\$197,000
2022-061	Ritchie	Alan	Seed Collection of Early-Blooming Plants for Pollinators	MN DNR, Ecological and Water Resources Division	\$200,000
2022-113	Jennings	Carrie	Water, Wildlife and Weather Friendly Funds	Freshwater Society	\$195,000
2022-124	Barney	Brett	Developing a Novel Biodegradable Plastic to Replace Polyethylene	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$172,000
2022-125	Arvidson	Adam	Connecting the Mississippi Flyway to Urban Open Space	Minneapolis Parks and Recreation Board	\$175,000
2022-132	Swenson	John	Monitoring Post-Nourishment Beach Evolution on Minnesota Point	U of MN, Duluth	\$99,000
2022-151	Schrank	Amy	Increase Golden Shiner Production To Protect Aquatic Communities	U of MN, Duluth - Sea Grant	\$197,000
2022-188	Zhang	Jiwei	PFAS Fungal-Woodchip Filtering System	U of MN, College of Food, Agricultural and Natural Resource Sciences	\$189,000
2022-205	Pirkl	Anthony	Lake of the Woods Angler Biosolids Feasibility Study	Lake of the Woods County	\$195,000
2022-216	Kaproth	Matthew	Shifting Savannas: Assessing Management of At-Risk Sites	Minnesota State Colleges and Universities, Minnesota State University Mankato	\$194,000
2022-248	Van Natta	Steven	Wetland Restoration of UMLA's New Gateway Entry	U of MN, Landscape Arboretum	\$174,000
2022-293	Meagher	Jen	Lake Koronis Water Quality and Restoration Action Plan	Koronis Lake Association	\$196,000
				Subtotal	\$2,183,000
G. Land Acquisition, Habitat, and Recreation (25 Proposals / \$59,278,000)					
2022-005	Manzoline	Robert	Mesabi Trail: Wahlsten Road (CR 26) to Tower	St. Louis & Lake Counties Regional Railroad Authority	\$1,980,000
2022-008	Yoho	Marla	The Missing Link: Gull Lake Trail, Fairview Township	Fairview Township, Fairview Trail North Portion - Gull Lake Trail	\$2,362,000
2022-038	Johnson	Donna	Redhead Mountain Bike Park	Minnesota Discovery Center	\$1,977,000
2022-057	Mularie	Audrey	Local Parks, Trails and Natural Areas Grant Programs	MN DNR, Grants Unit	\$4,000,000

**ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries**

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-088	Knettel	Cliff	St. Louis River Re-Connect	City of Duluth	\$2,000,000
2022-101	Schulte	Judy	Native Prairie Stewardship and Prairie Bank Easement Acquisition	MN DNR, Ecological and Water Resources Division	\$1,520,000
2022-111	Kok	Shelby	Minnesota State Parks and State Trails Acquisitions	MN DNR, State Parks and Trails Division	\$4,250,000
2022-127	Fralich	Lana	Silver Bay Multi-Modal Trailhead Project	City of Silver Bay	\$3,000,000
2022-128	Markle	Jami	Gateway Wildlife Management Area Pilot Project	MN DNR, Fish and Wildlife Division	\$2,862,000
2022-135	Skaar	Kent	Minnesota State Trails Development	MN DNR, State Parks and Trails Division	\$8,300,000
2022-140	Melin	Kaycee	Brookston Campground, Boat Launch and Outdoor Recreational Facility	City of Brookston	\$925,000
2022-143	See-Benes	Britt	Silver Lake Trail Connection	City of Virginia	\$1,275,000
2022-144	Geissler	John	Preserving the Avon Hills with Reverse-Bidding Easements	Saint Johns Arboretum and University	\$2,507,000
2022-150	Suonvieri	Corinne	Floodwood Campground Improvement Project	City of Floodwood	\$1,600,000
2022-158	Roske	Molly	SNA Habitat Restoration, Public Engagement, and Protection	MN DNR, Ecological and Water Resources Division	\$3,110,000
2022-165	Gautreaux	Sherril	Ranier Safe Harbor/Transient Dock Phase 2	City of Ranier	\$2,100,000
2022-170	Langowski	Harold	Prospector ATV Trails	City of Ely	\$1,851,000
2022-183	Simonson	Ryan	Paul M. Thiede Fire Tower Park Acquisition	Crow Wing County	\$405,000
2022-195	Terrill	Tim	Whiskey Creek & Mississippi River Water Quality/Habitat/Recreation 2	Mississippi Headwaters Board	\$500,000
2022-222	Yavarow	Matthew	Perham to Pelican Rapids Regional Trail (West Segment)	Otter Tail County	\$2,836,000
2022-253	Jacobson	Jeff	City of Biwabik Recreation Area	City of Biwabik	\$1,414,000
2022-262	Arvidson	Adam	Above the Falls Regional Park Acquisition and Restoration	Minneapolis Parks and Recreation Board	\$950,000

**ENRTF Request for Proposal (RFP) - FY 2023
Final Proposals Received by Category without Summaries**

Proposal ID	Last Name	First Name	Title	Organization	Funding Total
2022-263	Forbes	DJ	Turning Back to Rivers: Environmental and Recreation Protection	The Trust for Public Land	\$3,804,000
2022-276	Monson	Kjersti	Early Enhancements: Upper St. Anthony Falls Lock	Friends of the Lock and Dam	\$2,800,000
2022-292	Welle	Ron	Brooten Land Acquisition	Midwest Outdoors Unlimited	\$950,000
				Subtotal	\$59,278,000
G. Land Acquisition, Habitat, and Recreation					
H. Small Projects (3 Proposals / \$460,000)					
2022-027	Otremba	Bob	Pierz Park and Campground Expansion Project	City of Pierz	\$200,000
2022-041	Engebritson	Reggie	Environmental Learning Classroom with Trails	Independent School District #712, Mountain Iron Buhl Public Schools	\$82,000
2022-074	Langowski	Harold	Pioneer Mine Site Restoration/Trezona Trail Preservation	City of Ely	\$178,000
				Subtotal	\$460,000
I. Administration (1 Proposal / \$210,000)					
2022-121	Sherman-Hoehn	Katherine	ML 2022 Contract Agreement Reimbursement	MN DNR, Grants Unit	\$210,000
				Subtotal	\$210,000
				Total	\$178,176,000