

2018 Environment and Natural Resources Trust Fund Proposals Selected to Present

217 proposals requesting a total of approximately \$183 million were received. This RFP process is for funding available beginning July 1, 2018. For that period, approximately \$45 million from the Environment and Natural Resources Trust Fund is available to recommend for project funding. The LCCMR reviewed, evaluated, and ranked all proposals received. On September 13, 2017, the LCCMR selected 101 proposals to receive further consideration and to invite to present before the Commission. Proposal presentations for those invited are scheduled to occur September 26, 27, and 28 and October 3, 4, and 5.

ENRTF ID #	Last Name	First Name	Proposal Title	Summary	Organization	\$ Requested
<b>A. Foundational Natural Resource Data and Information (SELECTED TO PRESENT: 20 Proposals / Subtotal = \$15,738,794)</b>						
001-A	Setterholm	Dale	Minnesota Geological Survey Geologic Atlases for Water Resource Management Part-A	This project continues accelerated production of County Geologic Atlases to support informed management of water and mineral resources. This work is essential to sustainable management of water.	U of MN - MN Geological Survey	\$ 4,121,625
002-A	Putzier	Paul	County Geologic Atlas for Water Resource Sustainability Part-B	County geologic atlases provide information that is essential to sustainable management of Minnesotas groundwater resources by identifying key areas to protect our drinking water and ensure future availability for all.	MN DNR	\$ 2,400,000
003-A	Peterson	Jeffrey	Providing Critical Water Quality Information for Lake Management	Create a semi-automated system to acquire, process, and deliver new satellite derived water quality data (water clarity, algae, turbidity and color) for all Minnesota lakes ~biweekly and in near real-time.	U of MN	\$ 477,000
004-A	Weiblen	George	Minnesota Biodiversity Atlas: Phase II Expansion	We propose to double the size of a natural resource management tool, the Minnesota Biodiversity Atlas, by including state agency observations and specimen records from four additional museum collections.	U of MN	\$ 496,000
006-A	Windmuller-Campione	Marcella	Maximizing Wildlife, Water, and Productivity in Peatland Forests	There are 3 million acres of peatland forests in Minnesota. This proposal will identify management actions that maximize ecosystem benefits of peatland forests, including wildlife, water, timber, and native plants.	U of MN	\$ 698,000
007-A	Jennelle	Christopher	Deer Movement Related to potential CWD Prion Transmission	Movement ecology of white-tailed deer in southeastern Minnesota as related to chronic wasting disease prion transmission. DNR will radiocollar deer to evaluate deer movements and disease transmission potential.	MN DNR	\$ 552,456

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008-A	Montgomery	Rebecca	Safeguarding Red Pine Forest Health and Productivity	We will produce guidelines to maintain and maximize healthy and diverse pine forests with sustained growth and productivity of our state tree, the red pine, during seasonal and periodic drought.	U of MN	\$ 420,000
009-A	Andersen	David	Minnesota Trumpeter Swan Migration Ecology and Conservation	Obtain information essential to managing Minnesotas rapidly growing trumpeter swans, using GPS-GSM satellite transmitters to delineate migration patterns and survival, and year-round habitat use and selection.	U of MN	\$ 389,988
011-A	Stapleton	Seth	Conserving Minnesota's Turtles through Research and Education	The Minnesota Zoo will improve the long-term viability of Minnesotas imperiled turtle populations by researching threats, implementing mechanisms to reduce mortality, and creating educational materials for use throughout the state.	Minnesota Zoological Garden	\$ 364,000
012-A	Etterson	Julie	Forest Regeneration – Validating Operational Seed Zones	Minnesota forests ecosystems are maintained by continual reforestation efforts. This project will update guidelines for seed sourcing to ensure that the right seed is being planted in the right place.	U of MN - Duluth	\$ 796,395
013-A	Stanton	Daniel	Assessing Ecosystem Services Provided by Lichens and Mosses	The proposed project aims to better understand the impacts that moss and lichens may have on water and pollution.	U of MN	\$ 213,000
014-A	VanderWaal	Kimberly	An Early Warning System for Wildlife Health Threats	This project will establish a surveillance system to monitor wildlife health in Minnesota through development of information management and analytical systems utilizing wildlife rehabilitation data.	U of MN	\$ 280,000
015-A	Daniel	Hernández	Restoring Prairie Biodiversity and Pollinator Habitat with Haying	This project will test how the frequency and timing of haying, used alone or combined with prescribed burning, can promote biodiversity and pollinator habitat in prairie.	Carleton College	\$ 458,362
016-A	Grinde	Alexis	Conservation of Minnesota's Forest Birds of Management Concern	Identify forest management actions and guidelines that maximize breeding season productivity across breeding cycle (nesting through post-fledgling) for three bird species of conservation concern: Golden-winged Warbler, Veery, and American Woodcock.	U of MN - Duluth NRRI	\$ 613,998

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017-A	Kinkel	Linda	Minnesota Soil Microbiomes: Foundational Database for Environmental Health	We will develop a systematic, statewide database of Minnesota soil microbiomes. This will provide a critical foundation to enhance understanding and guide management of Minnesota's environments and microbial natural resources.	U of MN	\$ 924,000
018-A	Niemi	Gerald	Mapping Avian Movement in Minnesota	Establish network of automated radiotelemetry stations to monitor bird migration and local movements of a threatened species, and develop strategic plans for long-term use of infrastructure to monitor animal movement.	U of MN - Duluth NRRI	\$ 682,060
022-A	Ferrington	Leonard	Variable Winter Thermal Regimes and Managing Trout Streams	Winter sport fishing for trout is a vibrant industry, but can be impacted by changing climate. We seek to understand how to conserve trout habitat, especially focusing on winter management.	U of MN	\$ 499,935
027-A	Jelinski	Nicolas	Foundational Assessment of Soil Health Metrics in Minnesota	This proposed work will produce a foundational dataset which can be used to set data-driven statewide soil health goals and establish a baseline soil health assessment for Minnesota.	U of MN	\$ 695,477
028-A	Bruse	Tanner	Cover Crops for Wildlife Phase I	In this proposed innovative study, we capitalize on the already known environmental and agricultural cover crop benefits and determine benefits current cover crop practices provide for wildlife habitat.	Pheasants Forever Inc	\$ 346,720
030-A	Duncan	Nancy	Data Acquisition to Develop Native Mussel Habitat Suitability	The acquisition of high-resolution sonar data provides important information essential for mapping mussel habitat while having ecological applications useful to resource managers and policy makers protecting Minnesota threatened/endangered native mussels.	National Park Service	\$ 309,778
<b>B. Water Resources (SELECTED TO PRESENT: 18 Proposals / Subtotal = \$10,765,545)</b>						
034-B	Coletti	Filippo	Removing Plastic Particle Pollution from Minnesota Water Bodies	The objective of the present proposal is to assess and provide remedy to the urgent problem of microscopic plastic particles polluting water bodies in Minnesota.	U of MN	\$ 388,557

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035-B	Peck	Joel	Wastewater Treatment Plant Optimization Pilot Program	A pilot program of wastewater treatment optimization without costly facility upgrades. This will lead to cleaner lakes and rivers without needless costs, and achieve significantly better treatment results.	Minnesota Pollution Control Agency	\$ 236,360
036-B	Bushley	Kathryn	Phosphorus Accumulating Fungi to Control Agricultural Runoff Pollution	This project will utilize non-mycorrhizal fungi that can access insoluble soil phosphorus to significantly decrease needs for phosphorus fertilizers and reduce phosphorus pollution to our water and lakes.	U of MN	\$ 361,000
037-B	Gulliver	John	Investigation of Road Salt Alternatives and Pavement Innovations	We will investigate road salt alternatives and pavement innovations that will reduce or eliminate the flux of chloride from road salt into our lakes, streams and groundwater.	U of MN	\$ 521,999
038-B	Behrens	Sebastian	Biological Sulfate Removal for Wastewater Treatment in Minnesota	Goal of the project is to improve Minnesota's water quality by removing sulfate from wastewater. The project will provide best management practices to integrate sulfate removal into wastewater treatment operations.	U of MN	\$ 494,000
039-B	Singer	Randall	Defining Minnesota's Environmental Antibiotic and Antibiotic Resistance Footprint	We will quantify and map antibiotic and antibiotic resistance gene contamination in Minnesota waters and soils and identify locations in need of mitigation to protect environmental, human, and animal health.	U of MN	\$ 921,584
041-B	Schoenfuss	Heiko	Contaminant Removal Efficiency of Urban Stormwater Treatment Ponds	Urban stormwaters contain biologically harmful contaminants of emerging concern whose abatement through best management practice ponds requires evaluation to safeguard habitats for aquatic species from mussels to birds.	St. Cloud State University	\$ 377,588
042-B	Bramburger	Andrew	Rapid Detection of Algal Toxins in Minnesota Lakes	We will use novel genetic and toxin characterization techniques to develop DNA based indicators of toxin risk. Citizen scientist sampling will be used to evaluate risk model application statewide.	U of MN - Duluth NRRRI	\$ 686,013

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045-B	Ng	G.-H. Crystal	Developing a Map of Arsenic Risk in Groundwater	Over 20% of private wells in west- and south-central Minnesota exceed the arsenic standard. Proposed arsenic risk map will transform 20 years of arsenic research into access to cleaner groundwater.	U of MN	\$ 550,000
048-B	Cui	Tianhong	Small Cheap Purification System for Cleaner Drinking Water	This project is to develop a small cheap purification system for community drinking water facilities to remove toxic contaminants. The technology is highly efficient to improve current drinking water quality.	U of MN	\$ 496,788
054-B	LaPara	Timothy	Emerging Pathogens in Lakes, Rivers, and Tap Water	This research project will provide critical information regarding how to treat surface water (used by 25% of Minnesota's population) to prevent outbreaks of Legionnaires' disease and infections by Mycobacterium avium.	U of MN	\$ 355,244
055-B	Jordan	Nicholas	Working Farmlands: Targeting Alfalfa Production for Water Protection	We will develop a farmer-led, market-based working lands approach for protecting water by targeted expansion of alfalfa production, and enable farmers to take this approach by expanding markets for alfalfa.	U of MN	\$ 752,913
057-B	Peterson	Heidi	Preventing Nitrate Contamination of Groundwater Using Perennial Grains	Establish and monitor 120 acres of intermediate wheatgrass (Kernza), a new perennial grain crop, in vulnerable wellhead protection regions of Minnesota to profitability reduce nitrate leaching to drinking water.	Minnesota Department of Agriculture	\$ 759,312
064-B	Robertson	Stephen	Unregulated Contaminants: Addressing Gaps in Drinking Water Protection	This project will characterize unregulated drinking water contaminants at wells and intakes (which pump from groundwater, lakes, rivers), and to examine if they persist after standard public water system treatment.	Minnesota Department of Health	\$ 2,107,920
072-B	Kohno	Satomi	Increasing Contaminants and Temperature Eliminate Minnesota Turtles	Quantifying factors, including estrogenic contaminants and rising temperature, responsible for turtle decline in Minnesota Lakes to provide natural resource managers opportunities to remediate sensitive habitats and stabilize populations.	St. Cloud State University	\$ 248,632

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074-B	Reavie	Euan	Minnesota's Coldwater Fish Decline: Causes and Solutions	Determine long-term causes of fish loss and develop management recommendations for rehabilitation of coldwater fisheries in hundreds of lakes. A collaboration with the MNDNR to enhance the sentinel lakes program.	U of MN - Duluth NRRI	\$ 789,021
086-B	Ebtehaj	Ardeshir	Optimal Configuration of Windbreaks for Agricultural Water Conservation	This proposal aims to develop a predictive tool that enables optimal configuration of windbreaks, canopy, and wind turbines for reduction of farm-scale water loss due to soil evaporation.	U of MN	\$ 368,614
094-B	Christensen	Courtney	ShellRock River Watershed Stormwater Quality Trading Pilot Program	This project will develop and implement a model stormwater water quality credit trading framework. The purpose is to provide voluntary, cost effective, pollutant reductions on a watershed scale.	Shell Rock River Watershed District	\$ 350,000
<b>C. Environmental Education (SELECTED TO PRESENT: 17 Proposals / Subtotal = \$7,495,311)</b>						
099-C	Legato	Denise	Increasing Diversity in Environmental Careers: Fellowships, Internships, Mentorships	This collaborative project creates a college to workforce pathway for under-represented students who are interested in pursuing Natural Resources careers by reducing barriers that inhibit successful educational attainment.	MN DNR	\$ 1,000,000
101-C	Lenczewski	John	Connecting Students with Watersheds through Hands-on Learning	Students will get outdoors for hands-on learning focused on water quality, groundwater, aquatic life, watershed health and their role as watershed stewards. Introductions to fishing and conservation will be offered.	Minnesota Trout Unlimited	\$ 581,270
102-C	Evans	Elaine	Pollinator Ambassadors for Urban Gardens	The Pollinator Ambassadors for Urban Gardens project will enhance outreach capacity for pollinator education by creating an outreach toolkit and training educators and youth for engagement in native pollinator education.	U of MN	\$ 421,431
103-C	Raber	Carrie	Online Modules Build Local Capacity to Protect Groundwater	This series of 8-10 online modules will increase knowledge and skills in local government staff and leaders so that Minnesotas groundwater is protected from overuse and pollution.	Minnesota Department of Health	\$ 335,000

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106-C	Foster	Shelli-Kae	YES! Students Take on Minnesota Water Quality Challenge	Youth Energy Summit (YES!) expands its successful model to improve local waterways by mobilizing over 20 youth-led teams in Minnesota communities to complete water quality related projects, monitoring and reporting.	Prairie Woods Environmental Learning Center	\$ 213,700
108-C	Thomas	Steve	Preserve Resources by Expanding the State's Reuse Sectors	This project will focus on creating a much more robust reuse economy throughout the State resulting in reduced solid waste, less pollution, more jobs, and small business development.	ReUSE Minnesota	\$ 363,910
109-C	Bakken	Timothy	Phase 2 Prairie Sportsman Statewide Environmental Education Project	Produce, broadcast and share 26 science-based environmental programs, 26 "call to action" and 27 "outdoor lifestyle" videos that inspire and demonstrate how to protect and engage with Minnesota's natural resources.	Pioneer Public Television	\$ 300,000
110-C	Mattson	Nicole	Unlocking the Science of Minnesotas Moose Decline	The Minnesota Zoo will develop educational displays and engaging, hands-on components to summarize scientific findings about moose decline in Minnesota. Information will be integrated online to increase accessibility for all.	Minnesota Zoological Garden	\$ 300,000
111-C	Poppleton	Kristen	Youth Convening Minnesota	Educating and engaging youth is critical to maintain and improve our heritage in natural resources. We will mentor youth and youth leaders to work with communities to address environmental issues.	Climate Generation: A Will Steger Legacy	\$ 300,000
112-C	Holger	Sara	Get Outdoors After School!	This project will equip out-of-school youth organizations across Minnesota with knowledge, skills and resources to incorporate outdoor nature activities into after-school programs and engage under-privileged children with the outdoors.	Project Get Outdoors Inc	\$ 30,000
114-C	Yakub	Mohamed	Integrating Environmental Science Research in High School Education	Working with researchers, 40 teachers statewide will integrate environmental research in their classrooms engaging students in scientific processes. Students will participate in ongoing scientific research and present at UofM	U of MN	\$ 445,000
115-C	Carlson	Stephan	Students Using Local Phenology Contributes to Citizen Science	Students lack real data to make STEM learning relevant. Partnering with nature centers and schools, this project trains a network of 1000 students to collect and analyze citizen science data.	U of MN	\$ 224,000

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116-C	Knight	Joseph	Strengthening Natural Resources Management with Drone Training	The goal of this project is to provide training to enable natural resource professionals to effectively use drones in restoring, protecting, and managing natural resources.	U of MN	\$ 132,000
118-C	Poppe	Steven	Morris Prairie Pollinator Demonstration and Education	Project will restore and demonstrate a native prairie habitat in order to enhance the local ecosystem for beneficial pollinators as well as to offer educational opportunities.	U of MN	\$ 681,000
120-C	Pulscher	MaryLynn	Expanding Nature Knowledge and Experience in North Minneapolis	Compelling, new, interactive exhibits at North Mississippi Regional Park will spark curiosity, increase knowledge, change behavior, and inspire a diverse audience of 326,000 annual visitors to explore the outdoors.	Minneapolis Parks and Recreation Board	\$ 865,000
121-C	Suss	Ted	River Watch on the Minnesota River	Continue and expand a River Watch program on the Minnesota River engaging teams of high school students in water quality monitoring and reporting the data to the MNPCA	Friends of the Minnesota Valley	\$ 103,000
127-C	Kline	David	Preparing Minnesotans for Changes in Wolf Management	Minnesotans need to understand the complexities of successful state-controlled management, conflict resolution, and co-existence with our 2,400 wolves. A new educational exhibit at the International Wolf Center will help.	International Wolf Center	\$ 1,200,000
<b>D. Aquatic and Terrestrial Invasive Species (SELECTED TO PRESENT: 9 Proposals / Subtotal = \$24,709,051)</b>						
132-D	Venette	Robert	Minnesota Invasive Terrestrial Plants and Pests Center 4	Funding is requested to accelerate high priority research that will protect Minnesotas wetlands, forests, prairies, and agricultural resources from terrestrial invasive plants, pests, and pathogens.	U of MN	\$ 7,000,000
133-D	Merkes	Christopher	Developing RNA Interference Genetic Controls for Zebra Mussels	We propose to develop a genetic control tool that exploits the natural process of RNA silencing to effectively control zebra mussels without affecting other species.	U.S. Geological Survey	\$ 716,207
134-D	Sorensen	Peter	An Effective and Practical Invasive Carp Deterrent	Promising new carp deterrent system is tested in the Mississippi River along with an existing deterrent and predators; 99% blockage is suggested and Fish and Wildlife Service is a partner.	U of MN	\$ 998,000



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135-D	Abrahamson	Mark	Slow the Spread of the Emerald Ash Borer	Reducing the yearly rate of spread of the emerald ash borer through outreach and strategic management grants could delay spread throughout Minnesota for decades and save billions of dollars.	Minnesota Department of Agriculture	\$ 14,689,500
138-D	Ambourn	Angie	Monitoring and Biocontrol of Brown Marmorated Stink Bug	Brown marmorated stink bug is increasing in Minnesota. This project will expand monitoring to identify areas of spread, and gather data on native parasitoids and predators and implement biological control.	Minnesota Department of Agriculture	\$ 199,224
139-D	Heathcote	Adam	Determining Minnesota's Risk of a Toxic Algal Invader	This project will determine the historical distribution, abundance, and toxicity of the invasive blue-green alga, <i>Cylindrospermopsis raciborskii</i> , in Minnesota lakes using a combination of paleolimnological and contemporary monitoring techniques	Science Museum of Minnesota - St. Croix Research Station	\$ 243,000
141-D	Chandler	Monika	Palmer Amaranth Detection and Eradication Continuation	Find and control Palmer amaranth in conservation plantings to prevent severe economic damage and protect prairies.	Minnesota Department of Agriculture	\$ 431,200
147-D	Burks	Susan	Terrestrial Invasive Plant Detection Methods for Forest Lands	Develop and test aerial buckthorn detection methods in northern Minnesota; upgrade invasive plant risk model to prioritize forest surveys; design/test ground survey methods and integrate into annual work planning.	MN DNR	\$ 300,000
152-D	Windels	Steve	Evaluate Control Methods for Invasive Hybrid Cattails	This project will evaluate the effectiveness of two methods to remove exotic hybrid cattail to restore fish and wildlife habitat in Minnesota wetlands.	Voyageurs National Park	\$ 131,920
<b>E. Air Quality, Climate Change, and Renewable Energy (SELECTED TO PRESENT: 7 Proposals / Subtotal = \$6,637,374)</b>						
157-E	Reese	Michael	Agricultural Weed Control Using Robots	A robot, powered by solar energy, will be developed to control weeds on agricultural lands. We envision significant reductions in fossil-fuel and herbicide use while increasing local energy production.	U of MN - Morris	\$ 600,000
158-E	Kortshagen	Uwe	Clean Electricity from Solar Windows	Solar windows are a disruptive photovoltaic technology that virtually invisibly integrates with buildings. This renewable energy technology will increase photovoltaics adoption, reduce air pollution, and ameliorate climate change.	U of MN	\$ 458,494

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159-E	Anderson	Ellen	Community-Scale Energy Storage Guide for Renewable Energy	Create user-friendly, research-based energy storage guide and decision tools (print and web-based) for community-scale sites with renewable energy and do three geographically dispersed battery storage demonstration projects, through broad stakeholder-	U of MN	\$ 625,478
160-E	Cui	Tianhong	Cheap Solar Energy from Simple Roll-to-Roll Manufacturing	This project is to develop cheap clean solar energy by simple roll-to-roll manufacturing. Perovskite is a new photovoltaic material, very economical while maintaining high power conversion efficiency.	The University of Minnesota	\$ 388,852
166-E	Walsh	Kayla	Life Cycle Analysis of Anaerobic Digestion and Organics	A life-cycle analysis (LCA) of anaerobic digestion (AD) will evaluate the use of organic materials to create clean energy, conserve resources and reduce the amount of organics going to landfills.	Minnesota Pollution Control Agency	\$ 250,000
169-E	Randolph	Jimmy	Bringing Geothermal Power to MN: CO2 Power-System Test	Project will design, fabricate and test an innovative, closed-cycle CO2 power system, the first steps for geothermal power and grid-scale geologic energy storage to become renewable energy opportunities for MN.	TerraCOH Inc.	\$ 315,250
174-E	Weber	Mark	Production and Utilization of Biomass: St. Louis County	This project will facilitate the production and utilization of biomass as a source of energy while providing economic and environmental benefits to the citizens and industry of St. Louis County.	St. Louis County Land & Minerals Dept	\$ 3,999,300
<b>F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat (SELECTED TO PRESENT: 16 Proposals / Subtotal = \$23,354,030)</b>						
178-F	Henderson	Carrol	Nongame Wildlife Program Acceleration	This acceleration package will fulfill ENRTF goals including rare wildlife data collection and management, conservation education, collaborative land protection management, & new emphasis on nature tourism to benefit rural communities.	MN DNR	\$ 2,000,000
179-F	Remucal	David	Preserving and Restoring Minnesota's Native Orchids – Phase 2	Minnesota's 48 native orchids are at risk. The Minnesota Landscape Arboretum will expand conservation of species through propagation and banking and begin restoration planting research in the program's second phase.	U of MN	\$ 468,000

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180-F	Schottler	Shawn	Show Me the Money: 10 Markets for Perennials	Design and evaluate 10 market-based scenarios for perennial cropping systems and their potential to improve water quality and provide wildlife habitat. Create awareness through thought-provoking videos, fact sheets, and presentations.	Science Museum of Minnesota - St. Croix Research Station	\$ 347,500
182-F	Quinn	Edward	Restoring Minnesota's Forests in State Parks	Restores 420 acres of high-quality forests at Itasca, Jay Cooke, Scenic, Forestville Mystery Cave and Wild River State Parks and Greenleaf Lake State Recreation Area.	MN DNR	\$ 432,240
183-F	Wickert	Andrew	Sediment Hazards to Trout in Southeast Minnesota Streams	Excess sediment in southeast Minnesota streams can smother trout eggs. Large floods can crush them with gravel. We build knowledge to restore and improve trout populations, fishing, and habitat.	U of MN	\$ 337,000
184-F	Ulrich	Jason	Repurposing Unprofitable Cropland: Water and Wildlife's Silver Bullet?	Conduct the first statewide quantitative analysis estimating the extent of unprofitable croplands, and quantify the water-quality and habitat benefits of converting these lands to perennial vegetation.	Science Museum of Minnesota - St. Croix Research Station	\$ 319,063
185-F	Guala	Michele	Advancing Streambank Protection Systems	We request funding to build and test a prototype of a new bank protection system designed to protect stream banks, limit erosion and provide electricity in pristine ecosystems.	U of MN	\$ 286,426
186-F	Larson	Danelle	Restoring Wetland Invertebrates to Revive Wildlife Habitat	Amphipods are wetland invertebrates that are critical wildlife food and indicators of water quality. We will assess reasons they are missing from Prairie Potholes and unique methods to restore amphipods.	MN DNR	\$ 417,895
187-F	Huckett	Steven	Implementing Novel Market-based Methods for Urban Habitat Restoration	The Implementing Novel Market-based Methods for Urban Habitat Restoration is intended to restore native habitat and evaluate methods which incentivize habitat restoration and sustainable conservation in an urban setting.	Great River Greening	\$ 499,900
188-F	Pagliari	Paulo	Converting Agricultural Wastes into Energy, Polymers, and Fertilizers	Swine manure, sugar processing waste, and ethanol fermentation waste contain significant amounts of unused energy and nutrients. This project will revolutionize waste management by converting these waste into primary resources.	U of MN	\$ 949,000

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189-F	Slesak	Robert	Increasing Timber Availability and Habitat with Soil Management	Develop strategies and practical tools to identify conditions that minimize impacts to soil across a wide range of conditions to promote regeneration of diverse forests, wildlife habitat, and timber availability.	U of MN	\$ 396,000
190-F	Rhees	Suzanne	Working Conservation Lands for Grazing, Harvest, and Habitat	The project will improve water quality, pollinator habitat, and other ecosystem services by establishing perennially-rooted crops on conservation lands for managed grazing, biomass, livestock feed, and emerging food products.	Board of Water and Soil Resources	\$ 315,000
191-F	Haines	Dustin	Are We Turning Wild Prairie Plants into Crops?	Prairie restorations use native plant seeds produced in agricultural conditions. Is this reducing plant diversity and establishment, thereby undermining restoration success? Our experimental and genetic studies will answer this question.	U of MN - Duluth	\$ 555,441
194-F	Rickert	Dave	MN CREP for Water Quality and Habitat	MN CREP is a federal and state partnership designed to improve water quality and provide habitat in the 54 County area through establishing buffers, restoring wetlands, and protecting groundwater resources.	Board of Water and Soil Resources	\$ 15,000,000
195-F	Pagliari	Paulo	Replacing Plastic Cover in Vegetable Production with BioMulch	A biodegradable product will be developed to replace non-degradable petroleum based plastic used in vegetable and fruit production. This project, if funded, will revolutionize horticulture in Minnesota, and potentially worldwide.	U of MN	\$ 310,000
196-F	Voit	Jan	Okabena Creek Water Quality and Flood Protection Demonstration	HLWD is partnering with agricultural landowners to create a pond and two-stage ditch, both of which would include the establishment of native prairie, pollinator habitat, and protection in perpetuity.	Heron Lake Watershed District	\$ 720,565
<b>G. Land Acquisition for Habitat and Recreation (SELECTED TO PRESENT: 13 Proposals / Subtotal = \$31,597,630)</b>						
199-G	Booth	Peggy	SNA Habitat Restoration, Public Engagement, and Strategic Acquisition	Scientific and Natural Area (SNA) habitat restoration and improvements (1000+ acres), increased public involvement, and strategic acquisition (700+ acres) will conserve Minnesota's most unique and rare resources for everyone's benefit.	MN DNR	\$ 6,760,265

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200-G	Christie	Jennifer	Minnesota State Parks and State Trails Land Acquisition	Minnesota State Parks and Trails land acquisition proposal is to acquire high priority parcels within legislatively authorized boundaries from willing sellers to protect Minnesota's environmental stewardship and enhance outdoor recreation.	MN DNR	\$ 5,000,000
201-G	Mularie	Audrey	Local Parks, Trails and Natural Area Grants	Provide approximately 25 matching grants for local parks, acquisition of locally significant natural areas and trails to connect people safely to desirable community locations and regional or state facilities.	MN DNR	\$ 3,000,000
202-G	Skaar	Kent	Minnesota State Trails - Development and Enhancement	This project is to focus on expanding recreational opportunities on Minnesota's State Trails through the development of new trail segments and/or the rehabilitation, improvement and enhancement of existing State Trails.	MN DNR	\$ 5,000,000
203-G	Schulte	Judy	Private Native Prairie Conservation through Native Prairie Bank	Native Prairie Bank will help landowners conserve native prairie through outreach to 10,000 landowners and practitioners, restoration and enhancement of 870 acres, and protection of 600 acres through conservation easements.	MN DNR	\$ 4,535,000
205-G	Manzoline	Robert	Mesabi Trail, County Road 88 to Ely Segment	3.5 mile long bituminous surface trail beginning at the intersection of Hwy 169 and County Road 88 to Ely. In Ely, connection will be made to existing Mesabi Trail.	St. Louis & Lake Counties Regional Railroad Authority	\$ 600,000
207-G	Illg	Jerome	Harmony State Trail Extension Land Acquisition	To acquire fee title to 16 parcels to allow for the extension of the state trail from Harmony south to the Iowa state boarder with a spur to Niagara Cave.	City of Harmony	\$ 235,000
208-G	Owens	Jay	Mississippi Blufflands State Trail - Red Wing Riverfront	Construction of an engineered and designed three-quarter mile segment of the Mississippi Blufflands State Trail along Red Wing's Mississippi River riverfront, from Barn Bluff Regional Park to Colvill Park.	City of Red Wing	\$ 920,000
209-G	Caneff	Denny	Superior Hiking Trail Enhancement Plan	Evaluate routing, safety, water management and other environmental and design issues of the Superior Hiking Trail and establish SHTA best practices methods for carrying out the resulting redesign plans.	Superior Hiking Trail Association	\$ 100,200

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212-G	Mork	Laird	Swedish Immigrant Trail Segment within Interstate State Park	Swedish Immigrant Regional Trail connection through Interstate Park to Taylors Falls City Hall. Build 180 bridge and trail segment A&B as illustrated. Segment C reviews and engineering only.	Chisago County Environmental Services	\$ 2,254,665
213-G	Doty	Josh	A Local-State-Federal Partnership Protects multiple public benefits on the Mississippi River	A partnership among the City of Baxter, Brainerd Public Schools, Camp Ripley Sentinel Landscape program and The Conservation Fund will acquire 200 acres of riparian forest on the upper Mississippi River Headwaters.	City of Baxter	\$ 700,000
214-G	Thoreen	Jim	Mississippi Riverfront Redevelopment Project	The City of Brainerd is requesting a \$1,000,000 grant for the preliminary and final design of the Three Bridges Trail, Phase 1 of the Mississippi Redevelopment Project.	City of Brainerd	\$ 1,000,000
215-G	Barrick	Melissa	Prioritize and Target North-Central Minnesota Lakes for Protection	This project will complete 18 permanent conservation easements, 30 forest management plans, and 20 best management practices (BMP) around Aitkin and Crow Wing Counties highest quality lakes.	Crow Wing SWCD	\$ 1,492,500
<b>H. Other (SELECTED TO PRESENT: 1 Proposal / Subtotal = \$135,000)</b>						
217-H	Sherman-Hoehn	Katherine	Contract Agreement Reimbursement	Provide continued contract management and customer service to ENRTF pass-through appropriation recipients. Ensure funds are expended in compliance with appropriation law, state statute, grants policies, and approved work plans.	MN DNR	\$ 135,000