

2019 Environment and Natural Resources Trust Fund Proposals Received

For the FY 2020 and FY 2021 biennium (July 1, 2019 - June 30, 2021), approximately \$59 million is available each year for funding from the Environment and Natural Resources Trust Fund. As of April 11, 2018, the Legislative-Citizen Commission on Minnesota Resources (LCCMR) received 273 proposals requesting a total of approximately \$191 million. This RFP process is for funding beginning July 1, 2019.

LCCMR reviews and evaluates all proposals against their 10 adopted evaluation criteria. On June 5-6, members select a subset of high-ranking proposals to invite for presentation before the LCCMR on June 19, 20, 21, 25, 26 and 27 in order to receive further consideration. On July 17-18, LCCMR then makes final selection and funding allocation decisions. These selected projects are presented to the 2019 Minnesota Legislature as the official LCCMR recommendations for spending from the Environment and Natural Resources Trust Fund.

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

ENRTF ID #	Last Name	First Name	Title	Organization	\$ Requested
A. Foundational Natural Resource Data and Information (RECEIVED: 27 Proposals / Subtotal - \$20,279,405)					
001-A	Carlson	Bruce	Minnesota Biological Survey – Continuation	MN DNR	\$2,987,000
002-A	Lusardi	Barbara	Minnesota Geological Survey Geologic Atlases for Water Resource Management	U of MN - MN Geological Survey	\$4,121,625
003-A	Davis	Mike	Restoring Native Mussels in Streams and Lakes	MN DNR	\$735,981
004-A	Texler	Hannah	Minnesotas Ecological Monitoring Network - Continuation	MN DNR	\$696,004
005-A	Etterson	Matthew	Mercury and PFAS Risk to Minnesota Raptors	Hawk Ridge Bird Observatory	\$282,093
006-A	Johnson	Lucinda	Optimizing Minnesotas Forest Products and Ecosystem Services	U of MN - Duluth	\$789,649
007-A	Nordquist	Gerda	Wild Bee Surveys in Minnesotas Forest Habitats	MN DNR	\$636,044
008-A	Sindt	Tony	Phase-II: Enhancing Understanding of the Minnesota River Ecosystem	MN DNR	\$598,241
009-A	Cornett	Meredith	An Integrated Statewide Forest Monitoring System for Minnesota	The Nature Conservancy	\$371,000
010-A	Kloiber	Steve	A Better System for Wetland Inventory Data Stewardship	MN DNR	\$291,000
011-A	Rao	Sujaya	Conserving Monarch Butterflies: Habitat Assessment and Citizen Engagement	U of MN	\$380,067

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012-A	Reavie	Euan	Conserving Lake Trout in Minnesota	U of MN - Duluth	\$782,549
013-A	Stapleton	Seth	Conserving Minnesotas Nine Species of Freshwater Turtles	Minnesota Zoo	\$333,000
014-A	Andersen	David	Minnesota Trumpeter Swan Migration Ecology and Conservation	U of MN	\$414,372
015-A	Nordquist	Gerda	Minnesotas Imperiled Bats - Protecting the Survivors	MN DNR	\$208,331
016-A	Ponder	Julia	Spruce Grouse: Sentinels for Boreal Forest Connectivity	U of MN	\$361,630
017-A	McClannahan	Valerie	Community Tree Canopy Assessment and Diversity Survey	MN DNR	\$914,447
018-A	Wolf	Tiffany	Next Step in Helping Minnesota's Moose: Understand Brainworm Transmission to Find Solutions	U of MN	\$434,186
019-A	Dumke	Josh	Tagged Trout Explain if Beaver Dams Stop Fish	U of MN - Duluth	\$389,874
020-A	Duncan	Nancy	Data Visualization Tool for Minnesota Riverbed Habitat	National Park Service	\$509,231
021-A	Roy	Charlotte	Grasslands, Grazing, and Greater Prairie-chickens: Testing Trade-offs	MN DNR	\$392,065
022-A	Feng	Xue	Mapping Climate and Insect Threats for Minnesota Pines	U of MN	\$339,474
023-A	Barker	Keith	Malaria in Migrant and Resident Birds of Minnesota	U of MN	\$417,544
024-A	Kimball	Jennifer	Wild Rice Conservation: Building a Genetic Resource Database	U of MN	\$296,000
025-A	McCann	Nicholas	Mapping Habitat Use and Disease of Urban Carnivores	U of MN	\$657,159
026-A	Fritz	Charles	RRB Seamless Foundational Geospatial Data Initiative	International Water Institute	\$559,860
027-A	Arends	Heather	Accelerated Aggregate Resource Mapping	MN DNR	\$1,380,979
A. Foundational Natural Resource Data and Information					
H. Proposals seeking \$200,000 or less in funding (RECEIVED: 20 Proposals / Subtotal - \$3,443,394)					
028-AH	Shaw	Dan	Minnesota Restoration Mapping and Pollinator Protection	Minnesota Board of Water and Soil Resources	\$199,898

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029-AH	Smith	Erik	Protecting Minnesota's Cold-Water Fish into the Future	USGS	\$168,760
030-AH	Moen	Ron	City Bats and Country Bats - Whats the difference?	U of MN - Duluth	\$200,000
031-AH	Hansen	Gretchen	Walleye Habitat Status to Guide and Prioritize Management	MN DNR	\$198,784
032-AH	Moen	Ron	Artificial Den Boxes for Fishers	U of MN - Duluth	\$190,000
033-AH	Wittkop	Chad	Influences of Glacial Sediment Chemistry on Water Quality	Minnesota State University - Mankato	\$199,244
034-AH	Andersen	David	Red-headed Woodpeckers: Indicators of Oak Savanna Health	U of MN	\$171,000
035-AH	Hall	Kristin	Implementing Conservation Plans for Avian Species of Concern	Audubon Minnesota	\$124,500
036-AH	Windels	Steve	Use Existing Data on Beaver Populations to Improve Management Outcomes in Minnesota	Voyageurs National Park	\$196,900
037-AH	Severud	William	Finding Fawns Based on GPS-Collared Deer Movement	U of MN	\$138,540
038-AH	Bump	Joseph	Aquatic Habitats for Moose and Enhanced Lake Foodwebs	U of MN	\$199,600
039-AH	Kipfmueller	Kurt	Foundational Ecological Information for Tribal Fire Management	U of MN	\$182,860
040-AH	Reschke	Carol	Characterizing St. Louis River Estuary Aquatic Habitats	U of MN - Duluth	\$198,000
041-AH	Mosiman	Garrett	Comprehensive Environmental Building Site Design Using GIS Mapping	U of MN	\$195,000
042-AH	Schilling	Jonathan	Data Foundations to Enable Open Research at Itasca	U of MN	\$140,000
043-AH	Sessoms	Florence	Assessing the Legacy of Minnesotan Urban Ecosystem Services	U of MN	\$72,675
044-AH	Forbes	DJ	Understanding Recreational Access: Lower St. Croix Pilot	The Trust for Public Land	\$141,000
045-AH	Swanson	Jacob	Aircraft Noise Pollution MN Valley National Wildlife Refuge	Minnesota State University - Mankato	\$192,544

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046-AH	Veraguth	Patrick	Improving Statewide GIS Data by Restoring the PLS	Minnesota Association of County Surveyors	\$135,250
047-AH	Yang	Zixuan	Mapping and Mitigation of Strong Winds in Cities	U of MN	\$198,839
B. Water Resources (RECEIVED: 52 Proposals / Subtotal - \$25,281,282)					
048-B	Arnold	William	Neonicotinoid Insecticides: Occurrence And Influence on Algal Blooms	U of MN	\$356,000
049-B	Arnold	William	Benign Design: Environmental Studies Leading to Sustainable Pharmaceuticals	U of MN	\$415,300
050-B	Babcock	Laura	Wastewater Nutrient Reduction through Industrial Source Reduction Assistance	U of MN	\$278,000
051-B	Schreiner	Kathryn	Quantifying Microplastics in Minnesotas Inland Aquatic Ecosystems	U of MN - Duluth	\$277,419
052-B	Novak	Paige	Outstate Wastewater: Improving Nitrogen Removal in Treatment Ponds	U of MN	\$402,033
053-B	Novak	Paige	Stimulating Bacteria to Degrade Chlorinated Industrial Contaminants	U of MN	\$252,884
054-B	Hozalski	Raymond	Improving Drinking Water for Minnesotans through Pollution Prevention	U of MN	\$345,778
055-B	Simcik	Matt	Protecting Minnesota Waters by Removing Contaminants from Wastewater	U of MN	\$345,877
056-B	Filstrup	Christopher	Satellite Tracking of Harmful Algal Blooms in Lakes	U of MN - Duluth	\$466,987
057-B	Elias	Mikael	Harnessing Minnesota's Biological Resources for Cleaner Waters	U of MN	\$388,000
058-B	Kyser	Scott	Reducing Municipal Wastewater Mercury Pollution to Lake Superior	Minnesota Pollution Control Agency	\$297,000
059-B	Berg	Jim	Understanding Groundwater Flow, Central Arrowhead, County Geologic Atlas	MN DNR	\$435,966
060-B	Carlson	Erin	Dangers of Nanoparticles on Aquatic Health	U of MN	\$494,075
061-B	Hillmyer	Marc	Membranes for Removing Toxic Metals from Mining Wastewater	U of MN	\$449,203
062-B	Hu	Bo	Phytoremediation for Extracting Deicing Salt from Roadside Soils	U of MN	\$360,231

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063-B	Valentas	Kenneth	Removing Phosphorous from Draintile Water Discharge- Phase II	U of MN	\$398,000
064-B	Barney	Brett	Transformation of Plastic Waste into a Valued Resource	U of MN	\$308,000
065-B	Ishii	Satoshi	Outstate Wastewater: Low-Cost and Efficient Nutrient Removal Technology	U of MN	\$275,000
066-B	Norris	Doug	Improving Wetland and Groundwater Management Through Hydrologic Monitoring	MN DNR	\$573,661
067-B	Gulliver	John	Eliminating Nitrate in Drain Tile Runoff	U of MN	\$398,623
068-B	Pennington	Derric	Evaluating Public and Private Benefits of Ag-Water Certification	World Wildlife Fund, Inc.	\$349,486
069-B	Barney	Brett	Harnessing What's Within: Minimizing Nitrogen Pollution through Localization	U of MN	\$290,000
070-B	Downing	John	Forecasting Lake Superior Water Level and Community Security	U of MN - Duluth	\$329,687
071-B	Bushley	Kathryn	Enriching Native Fungi to Control Aquatic Phosphorus Pollution	U of MN	\$356,000
072-B	Fuchs	Dennis	Accelerating Perennial Crop Production to Prevent Nitrate Leaching	Stearns County Soil and Water Conservation District	\$448,905
073-B	Trost	Jared	A Rapid, Mobile Vertical Groundwater Nitrate Sampling System	USGS	\$297,900
074-B	Penn	Lee	Storing Sulfide Safely at MN Mining Sites	U of MN	\$536,161
075-B	Donato	Justin	Combatting Antibiotic Resistance Through Bacterial Signal Manipulation	University of St. Thomas	\$444,865
076-B	Olander	Keith	Farm-Ready Cover Crops for Protecting Water Quality	Central Lakes College - Ag and Energy Center	\$741,184
077-B	Nieber	John	Setting Realistic Nitrate BMP Goals in Southeast Minnesota	U of MN	\$444,000
078-B	Hondzo	Miki	Enhanced Nitrogen Removal in Minnesota's Watersheds	U of MN	\$408,277
079-B	Ruan	Roger	Converting Concentrated Wastewaters to Fertilizers and Clean Water	U of MN	\$842,000

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080-B	Cui	Tianhong	Small Sensor Networks for Water Monitoring (Phase II)	U of MN	\$980,758
081-B	Heger	Sara	Testing Filter Removal of Microfibers for Water Quality	U of MN	\$320,936
082-B	Smith	Tim	Evaluating Long-Term Success of Wetland Hydrology Restoration	Board of Water and Soil Resources	\$294,662
083-B	Proctor	Beth	Assessment of Toxic-Algae/Phosphorus/E. coli Entering Minneopa State Park	Minnesota State University - Mankato	\$327,253
084-B	Wilson	Melissa	Protecting Water Quality with Comprehensive, Integrated Nutrient Planning	U of MN	\$1,721,159
085-B	Almendinger	James	The Future of Groundwater Supply	Science Museum of Minnesota	\$280,000
086-B	Hamilton	Trinity	Double Trouble: Blooms, Invasive Mussels and Lake Health	U of MN	\$576,279
087-B	Twine	Tracy	Sustaining Fresh Water Resources while Producing Healthy Crops	U of MN	\$496,988
088-B	Sterner	Robert	Pathways of Human Impact in Lake Superior	U of MN - Duluth - Large Lakes Observatory	\$568,470
089-B	Ziegeweid	Jeffrey	Assessing Algal Toxins in Fish from Minnesota Lakes	USGS	\$350,000
090-B	Current	Dean	Sustainable, Integrated Food Waste Treatment and Utilization	U of MN	\$1,076,000
091-B	Kang	Peter	Quantifying Water Exchange Between Groundwater and Surface Water	U of MN	\$478,276
092-B	Missaghi	Shahram	Mobilizing Minnesota Communities to Fight Proliferating Toxic Harmful Algal Blooms (HABs)	U of MN	\$513,179
093-B	Bramburger	Andrew	Rapid Detection of Algal Toxins in Minnesota Lakes	U of MN - Duluth	\$599,051
094-B	Roberson	Glen	Southeast Minnesota Cover Crop and Soil Health Implementation	SE SWCD Technical Support Joint Powers Board	\$806,540
095-B	Slesak	Robert	Maintaining Supply of Clean Water from Working Forests	U of MN	\$288,000
096-B	Shannon	Laura	Protecting Ground Water from Nitrogen in Potato Production	U of MN	\$798,070

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097-B	Goehring	Julie	Reducing Nitrate Harm in the Red River Basin	Red River Basin Commission	\$225,749
098-B	Musser	Kimberly	Minnesota River Basin: Point-Nonpoint Water Quality Trading	Minnesota State University - Mankato - Water Resources Center	\$399,634
099-B	Johnson	David	State Park Waste Water Systems Condition Assessments	MN DNR	\$1,173,776
B. Water Resources					
H. Proposals seeking \$200,000 or less in funding (RECEIVED: 19 Proposals / Subtotal - \$3,447,370)					
100-BH	Ulrich	Jason	Repurposing Unprofitable Cropland: Water and Wildlife's Silver Bullet?	Science Museum of Minnesota, St. Croix Watershed Research Station	\$199,618
101-BH	Chun	Chanlan	Evaluating Locally-Sourced Sanding Materials for Road Salt Reduction	U of MN - Duluth	\$162,445
102-BH	Putzier	Paul	Minnesota Spring Inventory Final Phase	MN DNR	\$71,000
103-BH	Cai	Meijun	Using Local Iron Byproducts to Remove Surface-water Phosphorus	U of MN - Duluth	\$195,216
104-BH	Bramburger	Andrew	Fake Food: Man-made Materials in Aquatic Food Webs	U of MN - Duluth	\$199,698
105-BH	Smanski	Michael	New Technology for Removing Mercury from Minnesota Waters	U of MN	\$199,000
106-BH	Dickhart	Andrew	Citizen-Aided Carp Management: Overcoming Roadblocks to Lake Restoration	Carver County Water Management Organization (CCWMO)	\$106,151
107-BH	Gutknecht	Jessica	Identifying Grassland Plant Mixes to Reduce Nitrate Pollution	U of MN	\$197,646
108-BH	Janke	Benjamin	Shallow Waters: Road Salt Impairment and Mitigation Potential	U of MN	\$196,720
109-BH	Kozarek	Jessica	Assessing Chloride Hot spots near native mussel beds	U of MN	\$200,000
110-BH	Lee	Sungyon	Plastic Debris Remediation in the Great Lakes	U of MN	\$199,979
111-BH	Knoll	Lesley	Warmer Winter Effects on Water Quality and Fish	U of MN	\$177,911

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112-BH	Jones	Perry	Are Metal Concentrations in Kawishiwi Waters Above Standards?	USGS	\$174,268
113-BH	Guala	Michele	Simulating and Exploring Drought Scenarios at Reduced Scale	U of MN	\$199,640
114-BH	Ebtehaj	Ardeshir	Minnesota Weather Smart Irrigation System for Water Conservation	U of MN	\$198,766
115-BH	Shen	Lian	Map and Monitor Turbidity in Minnesota Water Bodies	U of MN	\$197,012
116-BH	Nemmers	Troy	Spring Biological Nitrate Removal to Protect Drinking Water	City of Fairmont	\$175,000
117-BH	Trappe	Jon	Reducing Nitrogen Inputs and Loss in Minnesota Lawns	U of MN	\$197,376
118-BH	Hu	Bo	Electrochemical Process to Protect Sewer System from Sulfide	U of MN	\$199,924
C. Environmental Education (RECEIVED: 17 Proposals / Subtotal - \$8,771,388)					
119-C	Hamilton	Patrick	Water Lab: Engaging Minnesotans in Water Quality Challenges	Science Museum of Minnesota	\$830,000
120-C	Mercer-Taylor	Beth	GreenStep Schools: Statewide Program, 20 School District Pilot	U of MN	\$992,959
121-C	Grilley	Dorian	Environmental Learning by Bicycle for Ages 8-80	Bicycle Alliance of Minnesota	\$393,000
122-C	Jones	Isiah	Camp Sunrise: Respect Self, Others and the Environment	YouthCARE MN	\$237,000
123-C	Legato	Denise	Increasing Diversity in Environmental Careers: Fellowships, Internships, Mentorships	MN DNR	\$250,000
124-C	Knopf	Chris	Connecting Over 11,000 Students to the Boundary Waters	Friends of the Boundary Waters Wilderness	\$783,135
125-C	Fleischman	Forrest	Plugging Knowledge Gaps for Sustainable Forest Management	U of MN	\$300,000
126-C	Finlay	Jacques	Enhancing Water Quality Education with Inquiry and Research	U of MN	\$279,684
127-C	Carlson	Stephan	1000 Citizen Scientists Collect Phenological Data Statewide	U of MN Extension	\$224,000
128-C	Blair	Robert	Driven to Discover: Implementing Citizen Science in Classrooms	U of MN	\$262,314

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129-C	Blair	Robert	Incubating Citizen Science at the University of Minnesota	U of MN	\$1,706,203
130-C	Simer	Kurt	YMCA BOLD & GOLD Youth Leadership Environmental Education	YMCA of the Greater Twin Cities	\$507,990
131-C	Briscoe Runquist	Ryan	Connecting All Minnesotans with Science and Scientists	U of MN	\$277,800
132-C	Pachuta	Emma	Neighborhoods Sustained: Multimodal Education in Metro Suburbs	Transit for Livable Communities and St. Paul Smart Trips	\$756,793
133-C	Onufer	Judy	Race 2 Reduce: A Minnesota Water Resource Education Curriculum	H2O for Life	\$205,670
134-C	Henke	Bill	Northwest Minnesota Partners Unite to Grow Eco-system Stewards	Friends of Tamarac NWR	\$214,840
135-C	Hartman	Jay	Green Sustainability Walk - St. Anthony Village	City of St. Anthony Village	\$550,000
C. Environmental Education					
H. Proposals seeking \$200,000 or less in funding (RECEIVED: 24 Proposals / Subtotal - \$3,272,656)					
136-CH	Lutsky	Karen	A North Shore Community-Engaged Forest Landscape Laboratory	U of MN	\$199,000
137-CH	Liu	Donald	Teaching Sustainability through an Economics Lens	Minnesota Council on Economic Education	\$138,552
138-CH	Zanko	Lawrence	The Natural Resources Literacy Initiative	U of MN - Duluth	\$194,485
139-CH	Potter	Caitlin	Water-Focused Education Across Rural and Urban Communities	U of MN - Cedar Creek Ecosystem Science Reserve	\$190,000
140-CH	Woods	David	Youth Conservation and Stewardship Training Lab	Urban Roots	\$198,478
141-CH	Blair	Robert	Minnesota Master Naturalist at the Bell Museum	U of MN	\$173,422
142-CH	Kraus	Alan	A Farm Laboratory for Environmental Studies	Cannon River Watershed Partnership	\$199,900
143-CH	Hammes	Mary	Mississippi National River & Recreation Area Forest Restoration	Mississippi Park Connection	\$199,500
144-CH	Daniels	Lisa	4-H and Renewable Energy: Growing Young Leaders	Windustry	\$199,950

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145-CH	Musser	Kimberly	Slow the Flow in the Minnesota River Basin	Minnesota State University - Mankato - Water Resources Center	\$160,318
146-CH	Scholl	Laura	Citizen-Based Boulevard Bioswales Installation during Ash Tree Replacement	Metro Blooms	\$198,600
147-CH	Pedelty	Mark	Watershed: Arts-Based Education in Minnesota's State Parks	U of MN	\$84,926
148-CH	Moen	Sharon	Inventing Tools and Technologies to Improve Water Quality	U of MN - Duluth	\$136,433
149-CH	Johnson	Margaret	Middle Fork Crow River: Appreciate, Clean, Learn, Connect	Middle Fork Crow River Watershed District	\$12,968
150-CH	Mohan	Ned	Converting UMN's Sustainable-Electricity Course for Two-Year Community Colleges	U of MN	\$96,956
151-CH	Ohmans	Patricia	1,000 Trees for Frogtown: Restoring Inner City Canopy	Frogtown Green	\$88,350
152-CH	Meagher	Thomas	Owatonna ESTEM Middle School: Makoce Ohoda Outdoor Classroom	Owatonna Public Schools	\$26,475
153-CH	Allen	Gregg	Environmental Education Through the Generations Ages 5-105	Mesabi East Schools ISD 2711	\$199,908
154-CH	Doll	Phil	Discover the Prairie Outreach Campaign	Becker SWCD	\$190,100
155-CH	Cadieux	Valentine	Urban Food Habitat Signs and Curriculum Delivery	Twin Cities Community Agricultural Land Trust	\$53,175
156-CH	Aukema	Brian	Introducing Minnesotas Resource Professionals to Global Pest Experts	U of MN	\$19,400
157-CH	Berg	Christa	Establish an Environmental Education Activity Center in Coleraine	ISD 316	\$81,800
158-CH	Chapman	Rick	Expanding Minnesota Clean Marina Initiative to Protect Waters	Minnesota Clean Marina	\$200,000
159-CH	Swanson	Jacob	'Solarize your House' Modeling Activities for K12	Minnesota State University - Mankato	\$29,960
D. Aquatic and Terrestrial Invasive Species (RECEIVED: 8 Proposals / Subtotal - \$17,805,123)					
160-D	Phelps	Nicholas	Building Knowledge and Capacity to Solve AIS Problems	U of MN	\$5,000,000

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161-D	Chandler	Monika	Elimination of Target Invasive Plant Species Transition Phase	Minnesota Department of Agriculture	\$772,871
162-D	Frohnauer	Nick	Invasive Carp Acoustic Deterrence Field Trial at Lock19	MN DNR	\$300,000
163-D	McClannahan	Valerie	Communities and Citizens Manage Ash for EAB	MN DNR	\$3,246,610
164-D	Huinker	Dane	Boat Cleaning Stations and Education Prevent AIS Spread	Wildlife Forever	\$7,378,575
165-D	McCartney	Michael	Genetic Analysis of Spiny Water Flea Invasion Sources	U of MN	\$337,942
166-D	Elias	Mikael	Ecological Coatings to Mitigate Proliferation and Spread of Invasive Species	U of MN	\$401,000
167-D	McCartney	Michael	Zebra Mussel Genetic Biocontrol: Methods and Public Engagement	U of MN	\$368,125
D. Aquatic and Terrestrial Invasive Species					
H. Proposals seeking \$200,000 or less in funding (RECEIVED: 6 Proposals / Subtotal - \$960,072)					
168-DH	Ambourn	Angie	Brown Marmorated Stink Bug Phase2: Monitoring & Biocontrol	Minnesota Department of Agriculture	\$188,707
169-DH	Montgomery	Rebecca	Suppressing Reed Canary Grass with Native Plants	U of MN	\$191,000
170-DH	Dunning	Robert	Using Artificial Intelligence for Noxious Weed Detection	Stearns County	\$89,005
171-DH	Hansel	Ilena	Cook County Invasive Species Project	Cook SWCD	\$200,000
172-DH	Kramar	David	Mitigating Non-Native Plant Encroachment in Minnesota's Prairie Grasslands	Minnesota State University - Moorhead	\$191,360
173-DH	McLennan	Helen	Oak Wilt Suppression at Northern Edge	Morrison Soil & Water Conservation District	\$100,000
E. Air Quality, Climate Change, and Renewable Energy (RECEIVED: 16 Proposals / Subtotal - \$11,944,279)					
174-E	Edlund	Mark	When the Dust Settles: Pristine Lakes are Changing	Science Museum of Minnesota	\$696,667
175-E	Cui	Tianhong	Cheap Efficient Reactor to Remove Toxic Organic Compounds	U of MN	\$728,365
176-E	Reese	Michael	Development of Clean Energy Storage Systems for Farms	U of MN - WROC	\$994,224

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177-E	Sarkanen	Simo	Plastics from Unused Lignin in Plants and Trees	U of MN	\$998,000
178-E	Randolph	Jimmy	Grid-Scale Geologic Energy Storage in MN: Earth Battery	TerraCOH, Inc	\$315,250
179-E	Anderson	Ellen	Community-Scale Energy Storage Guide for Renewable Energy	U of MN	\$637,305
180-E	Holmes	Russell	Practical, Inexpensive, and Non-Toxic Solar Cells	U of MN	\$479,409
181-E	Monson Geerts	Stephen	Fugitive Mineral Dust Baseline Air Quality Project	U of MN - Duluth	\$600,000
182-E	Heins	Bradley	Optimization of a Net-Zero Dairy System	U of MN - WROC	\$876,706
183-E	Ruan	Roger	Instant On-Demand Nitrogen Fixation (iONF) from Air	U of MN	\$1,352,000
184-E	Goodnough	Troy	Harvesting Hidden Clean Energy from Wastewater Systems	U of MN - Morris	\$408,694
185-E	Chan	Gabriel	Support Tools for Facilitating Renewable Energy Choice	U of MN	\$243,232
186-E	ODay	Vicki	White Earth Nation Community Solar for Community Action	Rural Renewable Energy Alliance	\$572,702
187-E	Brown	Karl	Using Solar Resources to Create Student Scholarship Funds	Minnesota Coalition of Residential Environmental Learning Centers/Mounds View Public Schools	\$1,800,000
188-E	Sleezer	Robert	Self-Cleaning Solar Cell Coatings in Minnesota	Minnesota State University - Mankato	\$381,205
189-E	Soholt	Beth	Advancing Renewable Energy through Education and Community Engagement	Wind on the Wires	\$860,520
E. Air Quality, Climate Change, and Renewable Energy					
H. Proposals seeking \$200,000 or less in funding (RECEIVED: 9 Proposals / Subtotal - \$1,459,944)					
190-EH	Pappenfus	Ted	Sustainable Solar Energy from Agricultural Plant Byproducts	U of MN - Morris	\$185,018
191-EH	Randolph	Jimmy	Novel Combined Solar Thermal-Geothermal Heat Pump System	Juneberry	\$168,000

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192-EH	Mohan	Ned	Showcasing Carbon-Neutral, Energy-Positive Transformation of an Occupied House	U of MN	\$66,532
193-EH	Berman	Jesse	Associations Between Extreme Weather and Harmful Vector Populations	U of MN	\$199,531
194-EH	Mohan	Ned	Enhancing Renewables Utilizing Generators of Retiring Coal Powerplants	U of MN	\$183,301
195-EH	Park	Sung Goon	Wind Plants Interaction with Local Climate in Minnesota	U of MN	\$199,584
196-EH	Hill	Blaine	Modeling Energy and Environmental Roadmaps for Minnesota Communities	City of Morris	\$199,995
197-EH	Rog	April	Diverting Prepared Food from Landfills, Reducing Greenhouse Gases	Second Harvest Heartland	\$65,000
198-EH	Droessler	Bill	Clean Air Assistance Project (CAAP)	Environmental Initiative	\$192,983
F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat (RECEIVED: 32 Proposals / Subtotal - \$32,371,852)					
199-F	Aukema	Brian	Eastern Larch Beetle is Decimating Minnesotas Tamarack Forests	U of MN	\$382,000
200-F	Reinikainen	Mike	Evaluating Forestry Tools for Conserving Minnesota's Tamarack Forest	MN DNR	\$864,436
201-F	Montgomery	Rebecca	Sustaining One Million Acres of Minnesota Pine Forest	U of MN	\$420,000
202-F	Runquist	Erik	Saving Endangered Pollinators through Data-Driven Prairie Restoration	Minnesota Zoo	\$977,813
203-F	Petersen	Jessica	Evaluating Ecological Benefits of Prairie Plan Restorations	MN DNR	\$534,468
204-F	Galatowitsch	Susan	Ensuring High-Quality Restoration Outcomes in Minnesota	U of MN	\$529,102
205-F	Main	Rylee	Restoring the Upper Mississippi River at Lake Pepin	Lake Pepin Legacy Alliance	\$525,000
206-F	Taylor	Carrie	Minnesota Rare Plant Salvage Anoka Sand Plain Pilot	Anoka Conservation District	\$357,788
207-F	Hernandez	Daniel	Comparison of Burning and Haying for Prairie Restoration	Carleton College	\$338,111
208-F	Patelke	Marsha	Minnesota By-products Recycled to Sustainable Designed Soil	U of MN - Duluth	\$448,964

2019 Environment and Natural Resources Trust Fund Proposals Received

ENRTF ID #	Last Name	First Name	Title	Organization	\$ Requested
209-F	Buck	Wiley	Restoration, Engagement, Soil Health: St Cloud, Twin Cities	Great River Greening	\$2,180,000
210-F	Etterson	Julie	Forest Regeneration: Right Seed in the Right Place?	U of MN - Duluth	\$476,336
211-F	Haines	Dustin	Does Native Seed Farming Reduce Prairie Restoration Success?	U of MN - Duluth	\$449,962
212-F	Feeken	Neal	Conserving Minnesota's Best Prairie Habitats and Rarest Species	The Nature Conservancy	\$1,261,500
213-F	Zamora	Diomy	Promoting and Restoring Oak Savanna Using Silvopasture	U of MN	\$1,270,910
214-F	Lenhart	Christian	Innovative Strategies to Re-Introduce Wood into Driftless Area Streams	The Nature Conservancy	\$317,300
215-F	Shen	Lian	Evaluation and Improvement of Aeration in Lakes	U of MN	\$312,228
216-F	Huckett	Steven	Protecting Drinking Water Sources: 2,000ac in Mississippi Headwaters	Great River Greening	\$1,396,950
217-F	Salomon	Christine	Protecting Minnesota Birch by Sustainable Chaga Cultivation	U of MN	\$385,232
218-F	Peterson	Daryl	Piping Plovers and Common Terns: Critical Habitat Restoration	Minnesota Land Trust	\$1,243,500
219-F	Shen	Lian	Use Floating Mini-Islands for Wetland Restoration	U of MN	\$312,228
220-F	Albright	Bruce	Stony Creek Stream and Habitat Restoration Project	Buffalo-Red River Watershed District	\$1,750,000
221-F	Tuominen	Todd	Elm Creek Stream Restoration Phase IV Final	City of Champlin	\$858,650
222-F	Sykora	Justin	Woodland Restoration Project	The Belwin Conservancy	\$227,000
223-F	Christenson	Scott	Restoring 430 acres of the Panicum Prairie WMA	Shell Rock River Watershed District	\$650,000
224-F	Kaproth	Matthew	State of the Prairies: Assessing Public-Private Land Management	Minnesota State University - Mankato	\$337,055
225-F	Brethorst	Michael	Sauk River Dam Removal and Rock Rapids Replacement	City of Melrose	\$2,768,000

2019 Environment and Natural Resources Trust Fund Proposals Received

ENRTF ID #	Last Name	First Name	Title	Organization	\$ Requested
226-F	McClannahan	Valerie	Serving Community Forests by Assisting Low-Income Homeowners	MN DNR	\$415,024
227-F	Dorothy	Olivia	Mississippi Gorge Restoration Study	American Rivers	\$503,295
228-F	Kinney	Mike	Using Economic Analysis to Repair the Sunrise River	Comfort Lake-Forest Lake Watershed District	\$575,000
229-F	Drown	Bryan	Restoration of Norway Brook Connectivity to the Pine River by Removal of Norway Lake Dam.	City of Pine River	\$2,200,000
230-F	McCarty	Michael	Water Quality Mitigation Project	City of Mankato	\$7,104,000
F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat					
H. Proposals seeking \$200,000 or less in funding (RECEIVED: 16 Proposals / Subtotal - \$2,511,544)					
231-FH	Jordan	Nicholas	Supporting Pollinators and Prairie Restorations with Beneficial Fungi	U of MN	\$187,362
232-FH	Zlonis	Katharine	Conservation and Monitoring of Minnesota's Rare Arctic Plants	U of MN - Duluth	\$135,541
233-FH	Lynch	Michael	Develop Forest Management Methods that Enhance Bird Habitat	Forest Stewards Guild	\$197,337
234-FH	Noe	Ryan	Cost-Effective Environmental Protection by Predicting Land Use Change	U of MN	\$199,420
235-FH	Dee	Laura	Cooperatively Improving Minnesotas Remnant Prairies through Adaptive Management	U of MN	\$199,038
236-FH	Daub	Betsy	Integrated Research and Restoration in Prairie and Forest	Friends of the Mississippi River	\$150,583
237-FH	Merkord	Christopher	Combating Woody Encroachment with Grazing after Mechanical Clearing	Minnesota State University - Moorhead	\$199,704
238-FH	Johnson	Margaret	Farming for Water Quality: Implementation, Education, & Documentation	Middle Fork Crow River Watershed District	\$97,321
239-FH	Thompson	Ann	Improving Stream Restoration Designs to Prevent Project Failures	South St. Louis Soil and Water Conservation District	\$140,000
240-FH	LaBarre	Tom	Friends of Tamarac National Wildlife Refuge Wetland Restorations	Friends of Tamarac	\$80,500
241-FH	Yang	Zixuan	Shoreline Erosion Control Using Aquatic Plants	U of MN	\$199,019
242-FH	Cadieux	Valentine	Promoting Environmental Urban Agriculture	Hamline University	\$59,280

2019 Environment and Natural Resources Trust Fund Proposals Received

ENRTF ID #	Last Name	First Name	Title	Organization	\$ Requested
243-FH	Bendorf	Doug	City of Staples Street Sweeper Mitigate Wetlands Contamination	City of Staples	\$191,775
244-FH	Wiegrefe	Susan	Restoring Tree Cover and Diversity to Houston Streets	City of Houston, MN	\$83,080
245-FH	Deng	Bingqing	Prediction of Ice Shove in Lakes in Minnesota	U of MN	\$199,584
246-FH	OKeefe	Pete	Keep Usable Building Materials Out of Minnesota Landfills	Twin Cities Habitat for Humanity, Inc.	\$192,000
G. Land Acquisition for Habitat and Recreation (RECEIVED: 25 Proposals / Subtotal - \$59,448,660)					
247-G	Schulte	Judy	DNR Scientific and Natural Areas	MN DNR	\$5,758,000
248-G	Mularie	Audrey	Grants for Local Parks, Trails and Natural Areas	MN DNR	\$3,000,000
249-G	Christie	Jennifer	Minnesota State Parks and State Trails In-Holdings	MN DNR	\$5,000,000
250-G	Schulte	Judy	Native Prairie Bank Conservation Easements and Landowner Assistance	MN DNR	\$3,828,000
251-G	Skaar	Kent	Minnesota State Trails Development	MN DNR	\$8,750,000
252-G	Heggerston	Leah	National Loon Center: State Bird Survival and Protection	National Loon Center Foundation	\$4,000,000
253-G	Stewart	Nancy	Accessible Fishing Piers	MN DNR	\$320,000
254-G	Manzoline	Robert	Mesabi Trail Extensions	St. Louis and Lake Counties Regional Railroad Authority	\$5,150,000
255-G	Perry	Vanessa	Reviving a Camp for North Minneapolis Youth	Minnesota Land Trust	\$1,373,000
256-G	Kennedy	Tim	Britton Peak to Lutsen Mountains Mountain Bike Trail	Superior Cycling Association	\$350,000
257-G	Geissler	John	Preserving the Avon Hills with Reverse-Bidding Easements	Saint Johns University	\$2,410,500
258-G	Forbes	DJ	Turning Back to Rivers: Creating Recreation Opportunities	The Trust for Public Land	\$4,792,500
259-G	Greedy	Ross	Restoration of Winona's Prairie Island	City of Winona	\$352,201

2019 Environment and Natural Resources Trust Fund Proposals Received

ENRTF ID #	Last Name	First Name	Title	Organization	\$ Requested
260-G	Henderson	Scott	Sauk River Watershed Habitat Protection and Wetland Restoration	Sauk River Watershed District	\$2,247,520
261-G	Lantry	Tom	Lake Vermilion Trail Phase 1: Tower Connection	Lake Vermilion Trail Joint Powers Board	\$1,814,000
262-G	Gautreaux	Sherril	Rainy Lake Recreational Access and Boat Wash Station	City of Ranier	\$511,710
263-G	Berg	Anita	Purchasing 316 acres for Conservation and Agriculture Education	The Food Group	\$1,500,000
264-G	Bissonette	Cathy	Birch Lake Recreation Area Campground	City of Babbitt	\$700,000
265-G	See-Benes	Britt	Bailey Lake Trail and Fishing Pier	City of Virginia	\$681,000
266-G	Lammers	Julie	Vergas Long Lake Trail	City of Vergas	\$291,111
267-G	Roepke	Scott	Cannon Valley Trail Erosion Control/Water Quality Improvements	Cannon Valley Trail Joint Powers Board	\$1,586,200
268-G	Hasbargen	Bruce	Construct Bicycle/Pedestrian Bridge Near Pennington, MN	Beltrami County & Lady Slipper Scenic Byway, Inc.	\$600,000
269-G	Miller	Ryan	Glacial Edge Trail and Downtown Pedestrian Bridge	City of Fergus Falls	\$602,918
270-G	DeFrang	Brian	Winona's 1st Recreation Bridge over Highway 61	City of Winona	\$3,375,000
271-G	Beste	Bruce	Crane Lake to Vermilion Falls Trail	Voyageur Country ATV	\$455,000
G. Land Acquisition for Habitat and Recreation					
H. Proposals seeking \$200,000 or less in funding (RECEIVED: 1 Proposal / Subtotal - \$191,000)					
272-GH	Caneff	Denny	Making the SHTs Big Bad Five Beautiful Again	Superior Hiking Trail Association	\$191,000
I. Other (RECEIVED: 1 Proposal / Subtotal - \$135,000)					
273-I	Sherman-Hoehn	Katherine	Contract Agreement Reimbursement	MN DNR	\$135,000